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HISTORY

OF

A WORLD OF IMMORTALS

WITHOUT A GOD:

TRANSLATED FROM

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BY

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'THAT we are to live hereafter, is just as reconcilable with the scheme of atheism, and as well to be accounted for by it, as that we are now alive is; and therefore nothing can be more absurd than to argue from that scheme, that there can be no future state.'—BISHOP BUTLER.

CHAPTER I.

Concerning the Birth and Education of Dr. Gervaas Van Varken, and his Loathing and Abhorrence of the whole Human Race—How he met an Ancient Parsee merchant in Bombay, and got an introduction to the Great Magician of Thibet—How he went to Thibet; what he learned there, and how he departed from it.

[Mr. Gervaas Van Varken was a tradesman who flourished on the Boomptjes of Rotterdam in the early years of the last century. His business was that of a ship-chandler—for so we may approximately translate the inscription, 'Koopman en Touwwerk en andere Scheepsbehoeften,' which appeared at the side of his door.

Van Varken drove a tolerably brisk trade, and, being of extremely miserly habits, succeeded in accumulating a respectable amount of capital. He was a man of very

morose and sulky disposition, and, when he had reached the period of middle age, married a Vrouw who was not only gifted with a moral character closely resembling his own, but had, moreover, embraced Calvinistic views of the most austere type.

This disagreeable couple were blessed with a small family consisting of one son, called Gervaas, after the name of his father, and this Gervaas, junior, was the author of the diary before us.

The personal experiences of this unlucky youth were such that his imbibing the very gloomiest views of things in general, and, in particular, of human nature, was a simple matter of necessity. In his earliest childhood he arrived at the conclusion that there was absolutely nothing he could do which did not issue in a sound thrashing, administered either by his father or his mother—supplemented, in the latter case, by energetic assurances that his present suffering was a mere joke in comparison with the

elaborate and abiding torments in store for him, as a vessel of wrath, in the next world. In addition to these personal severities the child spent the greater part of his time locked up in an empty room, imperfectly clothed, more than half-starved, and with nothing whatever to do but reflect on the inscrutable problem of human life.

When he was ten years old he was sent to a school kept by a savage old friend of the ship-chandler, who carried out the parental system of discipline with even greater vigour; and thus it resulted that when in course of time Gervaas, junior, was moved to the University of Leyden to study for the medical profession—a profession for which he was destined by his father, without the slightest consideration for the young man's personal wishes—he had contracted such a habit of intense misanthropy that it remained with him as his leading characteristic for life.

Gervaas, though by nature of a somewhat

crusty disposition, was by no means a cruel man—at least he had none of that delight in inflicting pain, as such, which characterizes some of our species. In fact he was very fond of most sorts of animals, and confined his malevolence strictly to the human race, of which his experience had been so unfavourable. When his medical education was completed he was sent, as surgeon, for several voyages in an English vessel commanded by another malignant friend of his father; and assuredly the rough and coarse life on board had no tendency to counteract his pessimistic estimate of mankind. The British mariners, with their habitual contempt of foreigners, considered Doctor Van, as they called him, an eligible subject for all sorts of violent practical jokes; which, to do him justice, he retaliated, whenever he got the chance, by the infliction of lingering torments in various surgical operations.

The doctor, who had a considerable gift

for languages, soon picked up English, and a copy of the, just then published, 'Voyages of Captain Gulliver' falling into his hands, he read them with intense interest; being specially delighted with the account of the crazy philosophers in the third voyage, and, above all, with the horrible description of the Yahoos in the fourth. From this time, indeed, he seems to have invariably used this term in speaking of his fellow-men.

When he had reached the age of about thirty years his mother died; and as his father did not long survive her, the young man inherited an amount of property which afforded him a tolerable income, and rendered him independent of his profession. He resolved to abandon it and visit the East; for, having made several voyages to Bombay, he had come to the conclusion that the Yahoos of that part of the world were less intolerable than the European specimens of the breed.

So he took his passage in an English

East Indiaman, and, after an uneventful voyage, landed at Bombay in the early part of the year 1729. As soon as the anchor was cast in the roads he lost not a moment in quitting the ship, having with difficulty escaped the indignity of being obliged to shake hands with the Yahoo captain. On landing he took up his quarters at the house of a trader to whom he had a letter of introduction; and, shortly afterwards, by the merest accident, he encountered in the street an old Parsee merchant, who, though of course a Yahoo, seems not to have been absolutely intolerable in the eyes of the over-sensitive misanthrope, whose notes, at this point, become continuous for the first time.]

'As I was walking in the shade of a row of trees which lined the street, I was accosted by a very ancient merchant of the Parsee persuasion, who asked me if I had not come from England in the ship which arrived that morning. I replied that I had

been a passenger in her, and we fell into conversation. The old gentleman was not nearly so offensive to the senses as are the European Yahoos, and he was perfectly well acquainted with the English tongue. I found that, in the exercise of his calling, he had travelled a great deal in divers parts of Asia; and, from his way of talk, I gathered that the Yahoos of those countries were fully as abominable in his eyes as the European specimens of the breed were in mine own. This common sentiment of loathing for our neighbours proved to ourselves an occasion of union, and before long there was between us as warm a friendship as two Yahoos are capable of entertaining for each other.

'One day, as he was relating some of his adventures, he told me that, in the days of his youth, when travelling on mercantile business in the Himalayah Mountains, he chanced to meet a Thibetian gentleman named Koot Homi. Having on one occasion done a signal service to this Mr. Homi,

it came to pass that the Thibetian, who was of a grateful turn of mind, had always showed himself a faithful friend to the Parsee. The old merchant further informed me that Homi was a man endowed with many and strange gifts; that the famous wonders worked by the Indian magicians or jugglers were the merest play of babies, when compared with the feats accomplished by Homi; and that if you only whispered his name into the ear of one of these magicians when engaged at his work, the magician would give a frightful howl, and run as if Beelzebub himself was in pursuit of him.

'Among other wonders wrought by this Homi was one which struck me as the most notable of all. This was the power of moving himself, and various articles in contact with his person, in some inscrutable way from one district of the earth's surface to another, no matter how remote, and apparently in an instant of time. I asked my friend whether he had ever visited Mr.

Homi in Thibet. He told me that he had been there, but only once; that a long and terrible journey had to be undertaken; frightful mountain-passes had to be surmounted; that the country in which the magician's abode was fixed was inhabited by a strange society or brotherhood, the members of which were endowed with many of the powers possessed by Homi himself, who was their chief; and that access, unless by a special permission, which was very rarely granted, was an absolute impossibility.

'And hereupon the old man added an expression of his never-ceasing regret that he had not availed himself of his opportunity when in Thibet of endeavouring to persuade Mr. Homi to exercise his wonderful power upon him, either by transporting him wholly from the Yahoo regions, or, possibly, by transmuting him into a less hateful form. "I have never ceased to mourn over my stupidity in this respect," he said, "and,

were I only able for it, I should gladly repeat my visit to Thibet. But I am far too old to venture on the fatigues of such a journey. As for you, however, the case is quite different; you are an active and energetic man; and should you think it worth your while to try what might be done in your behalf in the way I have suggested, I will gladly give you a letter which will enable you to pass without hindrance from the Brotherhood to the head-quarters of Mr. Homi." I thanked him very much for his offer, and asked him to let me think the matter over till next day, when I should give him my answer.

'The more I reflected on my friend's kind offer the better was I pleased with the prospect of the journey. Inasmuch as life had become well-nigh intolerable, I cared but little for fatigue and danger. My time also was wholly at my own disposal. So next morning I told the Parsee that I gladly accepted his proposal; and he, without any

delay, not only wrote the promised letter of introduction, but also drew up for my use an itinerary of the most convenient road from Bombay to Eastern Thibet, containing notices of the towns, distances, and various peculiarities of the countries through which it was necessary to pass.'

[At this point the memoranda assume a very fragmentary form. This I have observed to be always the case when the doctor was actually engaged in travelling. When stationed for a time in some fixed locality he wrote out his observations pretty fully; but whenever he was moving about, mere hints are available for the guidance of the editor. His journey was evidently very long and arduous, and it certainly occupied several months. In its course many obstacles were plainly put in his way by the natives of the different territories which he had to traverse; and the annoyance thence arising greatly ruffled his temper, and seems to have increased to an

almost incredible extent his abhorrence of the human race.

At last his indomitable energy and perseverance were successful. He reached the mysterious Thibetian region; and, having exhibited the old Parsee's letter, he was permitted by the Brotherhood to pass to the residence of their chief. Koot Homi received the doctor in a very friendly manner, and even declined to inspect his letter of introduction, assuring him that the chief of the occult Brotherhood had no need to do so. Van Varken seems to have resided with the chief for about five months, and was evidently admitted to great intimacy with the whole of the Brotherhood.

One reason for this was clearly the very great interest taken by Homi in the 'Voyages of Gulliver,' a copy of which was presented to him by the doctor. In particular, the accounts of the philosophers in Lagado, and of the rational animals in the

outward shape of horses, encountered on his fourth expedition, were listened to by the sage with eager attention. The chief does not seem to have even in the slightest degree doubted the veracity of Gulliver; but he certainly expressed the most intense contempt for the Lagado professors, laying much stress on the profundity of their stupidity in not having amended the deplorable condition of the Struldbrugs in Luggnagg, of whose existence the professors were, doubtless, aware. 'Even when immortal life was given them to work upon, they were incompetent to ward off the effects of senile decay! Why, the merest tiro in our schools would be ashamed to allow the poor old Struldbrug to get into such a state,' said he, with scornful indignation.

But, though he showed much sympathy with Dr. Van Varken's longing to be transmuted out of the species he so much abhorred, Mr. Homi did not hold out any hopes of success in so laudable an endea-

vour. 'No,' said he, 'many years of arduous preparation, to say nothing of rare natural gifts, are indispensable qualifications for such transformation; few even of the adepts are capable of it. But the power of instantaneous passage from one terrestrial point to another is far more easily arrived at.'

And it appears that, after a few months' probation, the secret of this process was actually communicated to the doctor; but under such rigid obligations to silence that no traces of its nature are to be found committed to writing. All that can be ascertained about it is this — that an instantaneous disintegration, and equally rapid re-integration of the ultimate molecules of the bodies to be moved is effected; that the transit is accomplished through the medium of the undulations of the ethereal vehicle which pervades all space; and that the rate of transmission is identical with that of the transmission of light, namely, about

186,000 miles in a second. Once more the notes become continuous.]

I was greatly pleased at gaining this new and wonderful faculty of moving myself; but, after making a few successful essays, it seemed to me that, after all, I should not be much the better for its possession. Yahoos being everywhere spread over the face of the earth, wherever I moved I should still assuredly find them; and perhaps this was the reason why, as I was walking by myself one evening and chanced to see the planet Venus, or Hesperos, shining in the sky, the thought came into my mind that, inasmuch as the ether fills all the space between the planets, it might be just possible that the power of movement by disintegration of molecules, which, as yet, had only been essayed between places on the earth's surface, might extend as far as the planets themselves.

The moon, being far the nearest of the heavenly bodies, would naturally seem to

afford the most promising opportunity for trying the experiment; but, having learned in Thibet that she is quite destitute of air, I resolved to try some other region; for I thought it would be quite useless to arrive there, and straightway perish for want of breath. If I could only get as far as Hesperos my chances of life would be much better, inasmuch as I was assured, by the same philosophers, that there is good reason for believing that planet to be very abundantly supplied with air. Moreover, it fortunately happened that she was just then approaching the position called by astronomers her inferior conjunction, so her distance from the earth was not much over twenty-five millions of miles.

The main risk I should run in attempting to make this passage would evidently be the possibility, perhaps I should say the probability, of extinction of the vital force during the period of disintegration, which I estimated at a little more than two minutes. It was

known to the Thibetian Brotherhood that the disintegrated particles moved with exactly the same speed as light; and as light requires about eight minutes to traverse the distance between the sun and the earth, two would nearly suffice to move it as far as Hesperos in her lower conjunction. Whether after such an interval of suspension the vital force would maintain sufficient energy to accomplish the re-integration on which continuance of bodily life depends, an actual experiment alone could show. But I cared but little for the risk. Life had long become hateful to me; a chance was now given to escape the society of the Yahoos, and all their abominations. I resolved to try my luck—at the worst I should only perish.

I made no communication of my intention to the chief, lest perchance he should raise some objection to my intended enterprise; and, on the very next night, at ten o'clock, I went out, taking with me, in various pockets of the eastern dress which, for convenience

in Asiatic travel, I had adopted in Bombay, sundry small articles for the toilet, also my silver watch, and an ingenious instrument for measuring quantities of heat, which had been sent me as a gift just before I left home, by my good friend, Mr. Gabriel Fahrenheit, of Amsterdam, who had lately invented it. I sat down on a rock by the side of the mountain ; Hesperos was distinctly visible, though only a thin crescent of her illuminated face was turned towards the earth. Carefully noting the time, which was exactly thirty-seven minutes past ten, and having also marked the temperature, which was fifty-seven degrees of my thermometer, as the instrument is called, I accomplished the disintegration, indicating Hesperos as the goal.

CHAPTER II.

HERE BEGINS THE HISTORY OF HESPEROS.

Of the shining city of Lucetta—How Dr. Van Varken met an apparent Yahoo—Of the great astonishment of the citizens at sight of the Doctor, and how they gave him in charge to a committee of three—How the committee learned the Dutch tongue, and showed the Doctor sundry strange and wonderful maps.

On recovering consciousness I found myself lying on what felt like soft grass on the steep side of a mountain. The sky was intensely dark, no stars were visible, and, of course, there was no moon. Before me, at a considerably lower elevation, and, as well as I could judge, at a distance of four or five miles, I saw what had the appearance of a very brilliantly illuminated city; the illumination was such as no arti-

ficial light known on earth could approach in splendour. So strong was it, that even at the distance of the place where I was sitting its effect was quite visible in lighting the hill. In front of the city was a large sheet of water, and on it were many moving bodies, probably ships, all of them lighted with the same strange radiance which pervaded the city. I looked at my watch, and, as might have been expected, I found that it still marked thirty-seven minutes past ten. I had stupidly forgotten that, during disintegration, the machinery could not have worked, so I was unable to verify my computation of the time required for the transit. The mercury in the thermometer quickly moved up to eighty-six degrees.

I judged it best to stay where I was till daylight, especially as I saw some traces of dawn appearing in a quarter of the sky which I hence concluded to be the east. I awaited the coming day with great eagerness, and, I admit, with some anxiety, for it

would be hard to say what reception I might meet with. This much was plain—the planet was not destitute of some forms of life, and I had escaped the detestable Yahoos.

But, as the reader will soon learn, my conclusion was over-hasty. As the light gradually increased I began to make out at first the main features, and soon the minuter details of the landscape. The sloping ground on which I had landed formed the base of a high mountain. Dense forests concealed the summit; the lower part, on which I was sitting, was covered with soft short grass, and trees, most of them bearing some sort of fruit, were here and there scattered about. A few yards below me the steepness of the slope eased off into a gentle descent, and the mountain finally terminated on the shore of a deep bay of clear and still water. At the end of this bay lay the city which shone so brightly in the night; it was about five miles from my landing-place, and, as I afterwards learned,

was called Lucetta. The opposite shore of the bay, which was nearly ten miles wide, was occupied by a lofty range of peaked mountains. The temperature was high, but by no means intolerable, and the air was perfectly still.

I saw no traces of any habitation outside the city, and no signs of animal life, excepting birds, were anywhere visible, but of the birds there were many and lovely kinds. I was greatly struck by the appearance of the sky; this was completely covered with a canopy of white cloud, seemingly at an enormous elevation. I was very desirous to get a sight of the sun, and, if possible, to measure its apparent magnitude, which I knew must greatly exceed its appearance from the earth; but the thickness of the cloud was such that no trace of the disk was visible. I had hoped, by this means, to satisfy myself that I had really reached Hesperos, namely, by comparing the observed magnitude with that which I had computed,

and noted on a leaf of my pocket-book before I left Thibet. So I waited another hour, but seeing no signs of movement among the clouds, and despairing of getting an observation, I got up and walked down the hill in the direction of the city.

Presently the great steepness of the slope abated, and I soon arrived at a wide and smooth track which ran along the shore of the bay. The country was quite open; there were no walls, hedges, or any kind of fences —not even any of those notice-boards so familiar to the wanderer in civilized terrestrial regions, which address him by the name of Trespasser, and convey menaces. I turned into the road, in the direction of the city, and, after proceeding along it for about half a mile, I descried, at some distance, an approaching object, which, to my unspeakable horror, had all the look of a Yahoo.

As we came nearer the suspicion became a certainty. The creature was walking very

slowly, and seemed to be quite absorbed in contemplation of a small article which he held in his hand. He was a man of middle age, with an exceedingly intelligent cast of countenance, and his dress did not materially differ from the Eastern costume which had accompanied me from Thibet.

So I could not at all account for the extreme intensity of his astonishment when, at last raising his eyes, he got the first sight of me as I walked towards him. He seemed completely paralyzed, gasped for breath, and for several moments was quite incapable of speech. Such utter stupefaction might have been manifested by the inhabitants of Lilliput and Brobdingnag when they first beheld Captain Gulliver, but in the present case there was no apparent cause for amazement. At length he recovered himself sufficiently to address a few words to me, none of which I could understand. I replied, but with the like want of success. I pointed to the sky, to intimate that I had come from

another world, and then to the city, as a hint that I wished to go there. Both of these signs he evidently understood, and he turned back, and accompanied me in silence. I must do my companion, and indeed all the Venusians (or Hesperians) I have encountered, the justice of admitting that, though in Yahoo form, they possess none of the offensive peculiarities of the breed.

We had not gone very far before we overtook a young girl of exceedingly prepossessing aspect, walking towards the city. She too, on seeing me, appeared to be struck with the same overwhelming and stupefying astonishment which had produced so great an effect on my first acquaintance. I could not understand it at all. There was nothing in the personal appearance of either the man or the girl which struck *me* as extremely unusual. Why, then, should I be so extraordinarily wonderful in their eyes?

When we came up with the girl the man stopped, and they talked in a very excited

manner for some minutes. While they were so occupied it occurred to me that something very remarkable might have happened in the reintegration of my body on arrival at the surface of the planet. I might, for all I knew, be suffering from some grotesque distortion of features, or other bodily misfortune. But no, that was not the cause of their wonder, for, as the road ran close along the shore, I took the opportunity of surveying myself in the clear water, and the reflection showed, beyond all possibility of doubt, that there was nothing whatever astray with my personal appearance.

Presently, hearing a slight noise behind me, I looked back, and saw a vehicle on its way to the city approaching us. It was running swiftly, although there were no horses attached, nor any visible motive power; the wheels ran on two steel rods which I had before noticed lying parallel to each other on the road. As soon as the vehicle reached the spot where we were

standing it stopped at once, and the man and the girl making signs to me to get into it, I did so. In the vehicle were about a dozen people, of various adult ages, the youngest seemingly about twenty years old, the eldest about sixty. They were of both sexes, and, with one consent, they all, old and young, male and female alike, received me with the same intense, and, as it seemed to me, needless amazement as the first man and girl had shown.

The vehicle resumed its course and ran on swiftly and with exceeding smoothness into the city. It was easy to see that I was the exclusive theme of the eager and excited discourse of the passengers. Their manner was very friendly, but their astonishment showed no signs of abating. A few minutes sufficed to bring us to the end of our journey. The car ran through a long and wide street, bordered on each side with rows of splendid trees. Through their foliage the houses were visible. Each house

was separated from its neighbour by an interval of several yards; was but one story in height; and, so far as I was able to judge from a hasty glance in rapid passage, was very elaborately and tastefully ornamented. It was plain that land was abundant, and ground rents, if any, were trifling.

We soon reached our destination—a large open space in the middle of the town. This great square was surrounded by stately public buildings, some of them being of considerable elevation. One of these was especially striking on account of its gorgeous magnificence. It had all the look of a vast cathedral, and the roll of deep-toned music, much resembling the tones of a powerful and curiously sweet organ, issuing from the open portals, served to heighten the illusion. Though still early morning, many people were about in the square, and, as soon as we alighted from the car, I saw the faces of all the bystanders assume

the same look of bewildered astonishment which all who had yet seen me so needlessly put on.

From all sides the people came running together; but there was no crowding or pressure; the multitude were most orderly, and seemed quite friendly in their demeanour; but it was plain that, for some mysterious reason, my arrival indicated a crisis in the history of the city. At last a young man, who appeared to be in a position of authority, mounted a low flight of steps which led up to the building before which the vehicle had stopped, and addressed a short speech to the assembled people. The crowd at once dispersed, and three persons came forward and took me in charge.

Two of these were men, one of them elderly, the other of middle age; the third of these custodians, as I had to consider them, was a very beautiful girl, seemingly about twenty years old. The countenances

of all three were characterized by marks of extreme intelligence; and each of them had a peculiar look which is common to all the Hesperians I have seen, and which I can no otherwise describe than as a look indicative of immense and profound knowledge. These three persons, as I afterwards learned, were appointed by the man in authority as a sort of commission to take charge of me, and endeavour to ascertain what I was, whence I came, and whither I was going. The real cause of the intensity of the wonder which I excited everywhere will be explained farther on.

The elder man made signs to me to walk up the steps, and enter the large building beside us, which I did, the others following. The steps led up to a spacious hall, from which long corridors branched out in various directions. One of the men inquired by gesture-language if I wished for food. As I was by this time exceedingly hungry, I replied, in the same way, that I was quite

ready for my breakfast. Whereupon they brought me to a room which opened into one of the corridors, where, on turning a handle in the wall, a sliding panel opened, and a table on rollers passed through. Various kinds of meats and drinks were on the table, and of these they invited me to partake. I made a hearty meal. I noticed, in particular, respecting some of the dishes, that they greatly resembled in taste various kinds of flesh-meat, very delicately cooked, but they were totally different in appearance from anything of the sort ever served up on earth.

I observed also that my three keepers did everything in their power to induce me to give the names, in my language, of every object in sight. The girl had a sort of small memorandum book, in which, with a fine pencil, she constantly wrote, in what seemed a system of shorthand, the words and sentences I uttered; and she and the two men repeated them articulately several times.

They gave me the idea that they were much more anxious to learn my language than to teach me theirs. In fact, I afterwards learned that this was part of the instructions they had received respecting me.

As soon as I had finished my breakfast they took me into a large room, which opened into another corridor, and was hung round with all sorts of charts. Among these I saw, to my intense astonishment, a large circular map, about sixteen feet in diameter, on which, depicted with singular accuracy, were the well-known outlines of the continents and larger islands of the eastern hemisphere of the earth. The immense white masses at the poles, the blue colour of the southern and Indian oceans, the yellow tinge of the Great Sahara and Asiatic deserts were especially prominent objects. The process by which this wonderful map was made was afterwards fully explained to me. It was what they called a sun-picture taken by the help of an enormous tele-

scope in one of the national mountain observatories, of which I learned much more afterwards.

They showed me several other equally excellent charts of the earth, exhibiting different portions of her surface. All of these were taken when she was in opposition, and therefore were all on the same scale. The committee showed great delight when I intimated my acquaintance with the details of the charts; inasmuch as this was a sufficiently clear proof of the place from which I came. I pronounced, as distinctly as I could, the names of the continents, seas, and principal islands, indicating, at the same time, by pointing them out, the localities named. All of these words they repeated as before; and the girl took them down in her rapid shorthand.

The extraordinary quickness with which these three Hesperians acquired the language of Holland would not be easily credited by an inhabitant of the earth. Still

it is a fact that, by the simple process of constantly conversing with me, and recording every word I spoke to them, in little more than a week all the three could speak our language with great fluency; while I, who had a great facility for learning foreign tongues, had acquired only a few words and elementary sentences of the Hesperian speech. This training in our language was by no means confined to the three members of the committee. Each morning the results of the day's conversation were faithfully reported in the Hesperian journals from the girl's memoranda; and the whole population of the city engaged with heart and soul in the study of Hollandish—plainly with the intention of putting themselves as quickly as possible in the way of getting an explanation of my astounding appearance among them.

CHAPTER III.

Concerning Physical Hesperography—Of the great Cloud-Screen, and its effect on Terrestrial Astronomy—Of the Chronic Equatorial Tornado, and of its extraordinary importance in the history of Hesperos—Of the Giant Mountains; and of the Flora and Fauna.

To understand aright the nature of my intercourse with the Hesperians, I must needs give a short description of the structure and principal natural features of the surface of their planet; and likewise some account of the origin of the rational inhabitants thereof, and of the main points wherein their conditions of life differ from our own. All this knowledge was obtained by me, after the establishment, as I have explained, of a means of communication, in the course of many dialogues, not only with the three

whom I had instructed in the Hollandish tongue, but also with many others, who had, with nearly equal quickness and ease, picked it up. But I think the reader will find it more convenient if I present him, in a connected discourse, this strange history which came to my knowledge only by degrees and in a rather roundabout way.

Our own astronomers have, long ago, computed the distance of Hesperos from the sun, her magnitude, density, time of rotation on her axis, and a few other particulars. Some of these computations are approximately right, but they have considerably over-estimated her distance from the sun, which is really not much over sixty-six millions of miles. And with respect to the physical geography, or more properly, Hesperography of the planet, they are, all of them, in absolute ignorance, and that for the best of possible reasons—no human being but myself has ever seen her surface. Improvements in the telescope will never enable

the terrestrial astronomers to penetrate the permanent stratum of cloud which, at an average elevation of twenty miles, surrounds the entire planet like a screen. The visible disk of Hesperos is simply the outer surface of this cloud-screen, which reflects the solar rays very copiously. The Hesperian atmosphere is of immense density, for the average height at which mercury stands in a tube constructed after the method of Signor Torricelli is somewhat over fifty-nine inches. It is fortunate that, except in the equatorial region, storms are unknown, for the impact of a hurricane of air of such density would be fatal to most forms of life.

This ponderous atmosphere supports the stratum of cloud just mentioned, which is sufficiently dense to act as a screen against the solar rays, and it thus renders the climate of the greater part of the planet by no means unpleasant. Though the supply of solar heat is nearly double of that received by the earth, I never, during my two years'

residence in Hesperos, experienced as much inconvenience from that source as I have frequently met with in our own tropical countries.

The planet is divided into two regions, which in ancient times were supposed to be, and, in one respect, really were, mutually inaccessible. The division is made by an immense equatorial ocean which surrounds the entire globe. The extent of this ocean, measured from north to south, is nowhere less than four thousand miles. Each of the poles is the centre of a vast continent which extends on all sides till it meets the great central ocean. The margins of these continents are exceedingly irregular in shape, being broken by arms of the sea, which often run up the country for many hundreds of miles. Many islands, some of which are of considerable size, are scattered through the ocean, but none of these lie at a very great distance from the mainland. The entire surface is nearly equally divided

between land and water, this distribution forming a marked contrast with the present state of the earth.

By far the most striking of the physical phenomena on the planet is the frightful chronic hurricane which rages round the equator. To this I must ask the reader's special attention, inasmuch as some of the most astounding events in the Hesperian history are only to be understood with reference to this extraordinary and hitherto unexplained tornado. I have already mentioned the exceeding density of the air, and also the fortunate exemption of the greater part of the planet from storms. But it seems that this latent energy of the atmosphere finds its vent in a zone about five hundred miles in breadth, of which the equator forms the central line. According to all accounts a permanent tornado, of such violence that one who is accustomed only to the storms which occur in the rarer atmosphere of the earth, is incapable of even imagining it,

tears and rages round this zone for ever. Still less could anyone conceive the aspect of the ocean subjected to this unceasing and tremendous hurricane. Anyone who could realize in imagination the cataract of Niagara, broken loose from its American moorings, and wandering on the sea, might perhaps have some notion of one of the equatorial waves.

This is the reason why I described the northern and southern Hesperian hemispheres as mutually inaccessible. No ship constructed by mortal hands could approach this pandemonium and live. We shall see, farther on, that, after the lapse of many ages, counting from the first appearance of rational life, the transit was effected in a wholly unexpected manner. This transit led to a most awful discovery, and with this discovery we shall see that the Modern History of Hesperos begins.

Moreover, the differences as to heat and cold in the various climatal regions of Hesperos

are not nearly so great as those which are experienced on the earth. This fact is partly to be explained by the considerable increase in the density of the permanent cloud stratum, which takes place as we approach the equatorial zone. This provides a more effective barrier against the solar rays in the districts where such a screen is most needed. For the purpose of residence the two polar regions are unquestionably far the most agreeable. Each of them abounds in beautiful lakes and magnificent mountain scenery. The Hesperian mountains are on a much larger scale than any which occur on the earth. In particular, starting from a point near the northern pole, there runs in a south-easterly direction a mighty chain which has several peaks not less than twenty English miles in height.

Some of these peaks even pierce through the cloud screen, and these have been made available for the construction of extensive astronomical observatories. There are

similar, though not quite as lofty ranges in the southern hemisphere, and their summits have been utilised in the same way. It should be observed that, were it not for these mountains, the Hesperians would have been wholly cut off from all knowledge of the remainder of the universe, for none of the heavenly bodies are visible through the permanent screen. I need not say that very great precautions are taken at all the observatories to protect the astronomers and the instruments from the great heat of the sun.

I have already mentioned that, with the terrible exception noticed above, storms are unknown in Hesperos. The country is everywhere well watered. There are no sandy deserts. Extensive evaporation takes place over the central ocean; rain clouds at a much lower altitude than the screen are constantly formed, and, being wafted by very gentle breezes over the land, discharge their contents in fertilizing rain. There are no thunderstorms or electrical phenomena of

any kind; no hesperoquakes, no volcanoes, nor indeed any of those vast natural instruments of death with which our earth is so copiously supplied.

The planet abounds, as might have been expected, in multiplied forms of vegetable life. There are many trees which closely resemble those of the earth; many also of very different types from any known here. The great preponderance in number of the fruit-bearing trees over the barren species is exceedingly noteworthy. As for the flowers, I have seen none on earth, tropical or non-tropical, which in any way approach the gorgeous splendour of the Hesperian colouring.

Animal life, on the other hand, is scanty, and confined to a small number of seemingly insignificant species. The bird tribe forms the only exception. Of these the forms are numerous and lovely, and, as they are never molested by the inhabitants, they are singularly tame. There are no large or

carnivorous mammals; and it is worth notice that in the small-sized and graminivorous types of this class — the only quadrupeds in Hesperos—the reproductive power is, in comparison with the earth tribes, exceedingly small. Insects and reptiles are wholly unknown; the numerous birds live entirely on the abundant fruits. I greatly appreciated the comfort of being able to sit and rest on the grass without being immediately covered with a disgusting swarm of stinging ants, and, when in the house, I soon learned to submit with resignation to the absence of the loathsome cockroach and the both loathsome and dangerous centipede and scorpion.

CHAPTER IV.

Of the Origin of Rational Life in Hesperos—Of the Cyclical Organic Life—Of the Law of Evanescence by Mortal Lesion—The story of the Hesperian Cain —Of the Law of Evanescence by adverse Metronomic Balance—How a Court of Justice sentenced a culprit to Eternal Punishment; and how the culprit escaped.

[WARNUNG BY ANTARES SKORPIOS.—*Should this book, by any mischance, have fallen into the hands of any habitual consumer of the style of literature known as 'Shilling Shockers,' or 'Penny Dreadfuls,' the Shocked or Terrified is earnestly exhorted to waste none of his valuable time on the pages which follow. He may rely on it that, although up to this point he* may *have been able to comprehend the narrative, the remainder of the work is utterly beyond his tether. I now proceed with my translation.*]

I SHALL now proceed to give an account of the nature and origin of rational life in Hesperos; but, before doing so, I must venture to address a word of advice and exhortation

to the reader. Should he, unhappily, be one of those narrow-minded persons who exalt the normal phenomena of this little globe of earth into the unique standard and pattern of what must needs prevail throughout the entire universe, he had better close the book at once. But should he be of larger mind, and allow the possibility of more than he has dreamed of in his philosophy existing in heaven, he may perhaps find in the following sketch of the ancient history of Hesperos, communicated to me by those who were themselves the eye-witnesses of what they related, abundant matter both for profitable reflection and delectable entertainment.

I may here add that, for the convenience of these large-minded readers, I have in all cases reduced the measures of time and distance from the Hesperian terms in which they were given to me, to those which are best known in Europe. Thus, when I speak of years, I mean our own period of 365 days,

and not the Hesperian of 224; and similarly I have expressed their measure of distance in English miles and feet; these being, perhaps, the best international standards.

The whole surface of Hesperos contains a little over one hundred and eighty-two millions of square miles. Hence, as land and water occur in nearly equal proportions, we have as the total amount of land about ninety-one millions. This again, being nearly equally divided between the north and south hemispheres, gives forty-five and a-half millions for each. If we deduct from this the odd five and a-half millions, as an allowance for the immensely high mountain chains, and other districts not suited for supporting life, we shall have left forty millions of square miles in each hemisphere available for that purpose.

Such being the physical condition of the planet, it happened that, in the year B.C. 18,270, just twenty thousand years ago, there suddenly appeared, uniformly dispersed over

the forty million square miles of the northern hemisphere, exactly one hundred millions of rational creatures in the likeness of the human race. This is an ultimate fact which has hitherto baffled all inquiry. The manifestation took place suddenly and simultaneously; but whether it was the result of a new creation, or of a translation from other regions of space, is wrapped in impenetrable mystery. For twenty thousand years the Unknown Power which called them into being has preserved a rigid and unbroken silence. All that is known is that at the above epoch one hundred millions of highly intelligent creatures, equally divided between the two sexes, male and female, simultaneously awoke into conscious life.

Though thus strictly contemporaneous in origin, they were nevertheless, so far as appearance indicated, of very different ages. They all seemed to be adults, but their aspects varied between that of an adult of twenty and one of sixty years of age.

It is not my intention to describe the long and complicated process by which these detached creations, all alike ignorant of what had taken place, were, in the long course of ages, gradually amalgamated into communities and states. This would form the subject of a separate work on the ancient history of Hesperos, for which I possess copious materials. [I fear lost.] I must here confine myself to setting out more in detail the extraordinary differences, as to their circumstances and conditions of life, which exist between the rational inhabitants of Hesperos and those of the earth.

The first fact which will strike the reader as a very extraordinary difference indeed is this—that, although there is the same distinction of sexes as is found on earth, and although there is just the same mutual attraction between them, there is no such thing as reproduction of the species. To counterbalance this strange fact, however, there are no such things, at least as the

result of natural causes, as disease, decay, and death. When I said that the apparent ages of the new created or imported Hesperians varied between twenty and sixty years, I did not mean to intimate, and the reader is not to infer, that anything in the slightest degree resembling the horrible condition of the Struldbrugs of Luggnagg has place in Hesperos. Far from it; the dependence of the bodily organism on the age of the individual in that planet has no analogy with the progressive decay of the wretched Struldbrug; it follows a more complicated law.

Every Hesperian, in fact, considered solely with reference to this bodily organism, leads a periodical life. The length of this period is not absolutely fixed, but it may be taken on an average at one hundred years, which may be conveniently divided into three sections, which may be respectively named as stationary, senescent, and juvenescent. For example, if we take a person who has just reached the apparent age of twenty

years, his organic life will proceed somewhat as follows:—For the next twenty years he or she shows no outward and visible sign of change; but, at the end of this first or stationary period, traces of departing youth begin to manifest themselves. This process goes on for forty years, much in the same way as is the case with the human race on earth; and, at the end of this period, which we call senescent, the person has, in external form, all the look of a man or woman sixty years old.

At or about this time a crisis in life takes place. This crisis is marked by the patient falling into a sort of stupor or trance, in which he usually continues for about seven days. On awakening from this trance he resumes his ordinary life, apparently under the same conditions as before. But the conditions are not the same. It soon becomes plain that the trance has wrought some mysterious change in his powers of bodily life. At the date of his awakening the last

section of the periodical life, called the juvenescent, begins. Change both in external form and bodily activity proceeds, but it proceeds in a reversed direction, so that at the end of ten years the man of sixty, instead of being promoted to the rank of a septuagenarian, has all the appearance of a man of fifty; ten years more bring him to forty, and so on, till the limit of twenty is reached again, and the stationary stage sets in once more.

Thus the cycle of one hundred years is completed—twenty years stationary, forty senescent, forty juvenescent. It should be remembered that these numbers only give averages; they vary in different cases within limits of a few years, nor are they, even for one and the same person, quite rigidly fixed. So the reader must not suppose that those who happen to be of the same apparent age at any one given date, will evermore preserve the same chronological relation to each other.

It appears at once from the consideration of this cyclical law, that about one-half of the population of the planet are (apparently) over, and the other half under, the age of thirty-five years. Still it must never be forgotten that this cycle of events affects the corporeal existence exclusively. Mental power is in no way under its control. Although it is true that, during the senescent period, both the desire and the capacity for active bodily exertion alike decline, there is no abatement whatever in the intellectual energy, or the slightest failure in the faculty of memory.

This, then, is the second essential difference between the Hesperian and the Terrestrial conditions of life. The first being the fact of Non-reproduction, the second may be called the Law of Cyclical Organism. A third still remains for our investigation.

This third essential difference was known, during the period of the ancient history of

Hesperos, as the Law of Evanescence. But, before proceeding to explain it, I must premise that, since the commencement of the modern history, it has been ascertained that the real significance of this law was entirely misconceived in the earlier period. Though the facts, so far as they had been then observed, were sufficiently accounted for by it, the observations had been very far from complete.

The reader has, of course, already noticed, as an obvious consequence of the fact of non-reproduction, that all the now existing rational inhabitants of Hesperos are contemporaneous with the sudden manifestation of rational life on her surface. Whatever appearances might seem to indicate, not one of them is under twenty thousand years of age. Even the lovely girl who made notes of my conversation was not a day under it, though, at that time, I should have found it very hard to believe the fact. I have already mentioned that there is no such thing as

death from disease or other natural and necessary cause. Still other causes may exist, and to these a portion of the original population may have fallen victims, so that the present Hesperians may be only the survivors of the original creation. These, too, some day or other may in like manner disappear, and rational life may thus be ultimately obliterated from the face of the planet. Such indeed was for ages the prevailing belief. How the belief was found to be based on an erroneous view of the actual facts will appear when we come to the history of the wonderful discovery which marks the commencement of the modern history.

But, as for the belief itself in the likelihood of extinction of life in the planet, its origin may be easily explained. Soon after the sudden creation, or manifestation, of the Hesperians, the people in contiguous districts began to fraternise with each other. By degrees small communities were formed; rude languages were invented; private

property began to be acquired; the advantages of co-operation and division of labour were dimly discerned. But, side by side with these marks of progress, many discouraging symptoms appeared. These, perhaps the inseparable companions of advancing civilization, were simply envy, hatred, jealousy, and all kinds of malice, too often resulting in energetic quarrelling, blows, and wounds.

In one of these early contests one of the combatants, who had armed himself with an exceptionally heavy bludgeon, chanced to strike his antagonist an awful blow on the temple. The result was equally awful. Instead of falling to the ground, stunned by the force of the blow, as had been the usual result under similar circumstances in many previous encounters, the man who had received it simply vanished —instantaneously vanished. Not a trace of him was left, and the Hesperian Cain stood staring at the vacancy which his departed brother had filled, gasping with

amazement and consternation at the work he had achieved.

As years went on many similar cases occurred. Occasionally this evanescence took place as the result of an accident; the co-operation of a neighbour, though a common, was not an indispensable antecedent. For instance, if a man fell over a precipice several hundred feet high—and many such are to be found among the mountains—evanescence on reaching the foot of it was invariable.

At length, by the process of comparing a vast number of instances in which this strange phenomenon had been observed, what was called the Law of Evanescence was established, namely, that a certain class of bodily injuries exist, which result in the instantaneous dissolution and disappearance of the recipient. And here I found my medical education of great service in enabling me to understand the nature of this law; for, from the accounts I got of the

various causes of evanescence, it became quite clear to me that in *almost* every case of the occurrence of the phenomenon, what would be called in human beings a mortal lesion is the invariable antecedent; that, in fact, the decomposition of the body, which on the earth takes place slowly, is instantaneously effected in Hesperos.

Having referred to my medical education, I may call the reader's attention, just in passing, to a difficulty which that education brought very forcibly before my mind. How could there be any science of anatomy in Hesperos? No corpses could be procured for dissection. An amputated arm or leg might be anatomised, but an examination of the structure of any of the vital organs is simply impossible. Just as, in mediæval times, medical students on the earth were obliged to have recourse to the dissection of the lower mammalia, in order to learn their business, so is it now with the Hesperians; and, in both cases, the results arrived at may be

useful as the grounds for more or less ingenious hypotheses, but are quite insufficient as a foundation for any science worthy of the name.

But the above account of evanescence as, in all cases, the result of mortal lesion, is not in absolute conformity with the facts of experience. Such lesions are unquestionably, in the vast majority of instances, the real causes of the phenomena. Still, occasionally, though comparatively rarely, cases occur which seem to be irreducible to any such rule, and these, for many ages, were regarded as inexplicable anomalies. However, the law which governs such mysterious cases of evanescence was at last found out, as I shall now proceed to explain.

This important discovery was really the result of the invention of a most ingenious instrument, by means of which the degrees of pain and suffering on the one hand, and of joy and satisfaction on the other, endured or enjoyed by any given individual, during

any assigned period, may be accurately measured, their aggregate amount computed, and the balance on either side struck. The machine is constructed somewhat on the principle of Mr. Fahrenheit's thermometer, but the details of the construction, and of the mode of fixing the unit on which the calculations rest, were not communicated to me; indeed, the Hesperian who gave me a general account of it very frankly assured me—and I find no difficulty in believing him—that to understand its mode of action lies far beyond the range of my merely human faculties. However this may be, it is not easy to see how, without some such invention, the Second Law of Evanescence could have been discovered; but, by the application of this wonderful instrument to a great number of cases, the Law in question was at last established on a sufficiently wide inductive basis.

This Second Law of Evanescence may be stated in a popular form as follows:—Evan-

escence takes place whenever the total quantity of suffering undergone by anyone, exceeds, by a certain fixed amount, the total quantity of happiness he has enjoyed. This fixed amount when estimated by the Hesperian joy-and-sorrow-metronome, above described, is exactly ten million units of its scale. When this negative balance is reached, the second law acts spontaneously, and the sufferer is thus released from all further misery.

Under the existing conditions of life in Hesperos, it would be hard to over-estimate the importance of this law. For example, only for it there is nothing to prevent a court of justice from sentencing a prisoner to eternal punishment. And, as a matter of fact, one of the very earliest noticed cases of anomalous evanescence was the result of just such a sentence.

The case occurred about three thousand years after the creation. At that time, states, governments, and courts of justice

had been fully established. In one of the larger islands not far from the northern continent, a somewhat turbulent citizen had, in a quarrel commenced by himself, 'evanesced' one of his neighbours, a man who happened to be exceedingly popular in the community where he dwelt. Public indignation was thereby excited to a terrible pitch. Cases of violent evanescence, or, as we should call them, murder, were frequent in the earlier periods; but, at the time of this outrage, they were beginning to be regarded with much disfavour. Owing to the absence of reproduction, it was quite plain that, unless this practice was discountenanced, the depopulation of the planet was inevitable; and, inasmuch as the question 'Is Life worth living?' had not yet been answered in the negative, it was resolved that the whole force of society should be brought to bear against all violent evanishers.

This state of public opinion, combined with the great amiability of the victim,

induced the judges to pass on the criminal a sentence which they must have believed to amount to eternal punishment, namely, penal servitude for life. Life was, at that time, held to be interminable, except by violence; and, inasmuch as the convict in prison was secure from everything of the kind, the sentence could bear no other interpretation. However, at the end of about three years and a half, the prisoner, without any apparent lawful reason, suddenly evanesced. This event greatly puzzled the community where it occurred; but after the discovery of the Second Law, there was no further mystery about it. The man's absolute wretchedness at the forlorn prospect before him of everlasting life in jail, was quite sufficient, without his undergoing any other form of physical suffering, to work his deliverance. The negative balance of ten million units was reached in the three years and a half, whereupon he departed into invisibility under the natural operation of the law.

It is obvious that the time which is required to make up the fixed number of metronomic units will depend very much on the degree of the intensity of the suffering undergone. Instances have occurred where a few days of exceedingly acute bodily torture have sufficed to raise the index to the required point. On the other hand, a man who is only suffering from chronic *ennui* may endure for half a century; the balance against him rising by very slow degrees. It should also be remembered that when a man who has enjoyed a very happy life falls into adversity, he will certainly have much sorrow to endure, before he can hope for deliverance by this beneficent law; for the balance on the positive side (for joy), which will be high, must be reduced quite down to zero before the negative summation begins.

From the above-stated facts the reader will have perceived that the conditions of rational life among the Hesperians differ from those experienced on the earth in

several essential points. The most important of these are the three following :—The absence of any reproduction of the species; the exemption of the individual from death, so far as this is the result of natural and necessary causes; and the cyclical waxing and waning of the powers of the bodily organism. Evanescence, though its real nature was unknown, had plainly, for the ancient Hesperians, the same significance as death has for us; the only difference being that, with them, the dissolution of the body was an instantaneous act, instead of being effected, except when accelerated by fire, through the medium of a slow and loathsome process of decay.

CHAPTER V.

Of the causes of the high civilization of Hesperos—Of the relations of the sexes—Of private personal property—Of property in Land; and of the methods of Eviction—Of the Jacks and Masters of all Trades.

When we bear in mind these essential differences of Hesperian life, the rapid development of civilization which took place in the northern hemisphere after the sudden introduction of the rational creation will not appear surprising. So far as I have been able to form an estimate, from the information that has been very freely afforded me, the newly created Hesperians were, both intellectually and morally, much on a par with the average of human beings. But the conditions under which they were placed rendered their advance in civilization incomparably more

rapid than anything which a similar species, circumstanced as we are on the earth, could hope to attain.

Their total exemption from the chronic paralysis of the human race which is involved in the incessant passage of the latter through the stages of infancy and childhood, would, by itself, be enough to give the Hesperians such a start in the race as to render competition useless. With us the intelligent man of matured wisdom departs, carrying with him to the grave the greater part of his accumulated stores of knowledge, and all his skill; leaving his successor, the child, to recover them as well as he can. The Hesperian is crossed by no such check; his course is one uninterrupted advance. Thus it came to pass that, after the lapse of a few thousand years, the condition of the northern hemisphere was, as regards every form of advanced civilization, a very long way ahead of anything even dreamed of, much less realized on earth.

It is quite necessary that I should here say a few words on the relations between the sexes in this strange planet. On this difficult subject I have taken abundance of notes from the information I received; information which, I am bound to say, was given me without the slightest reserve. [I suppress all details in these notes, as public opinion, very rightly, does not permit the discussion of such matters.] It is obvious of itself that the permanence of individual life renders the establishment of such a life-contract as marriage an impossibility. Accordingly, the Hesperian relation which most nearly corresponds with the matrimonial institution on earth usually lasts for one of the cyclical periods already described as one of the distinctive peculiarities of Hesperian life. This is, I say, the customary procedure; but the relation is terminable at any time, and at the will of either party concerned. It should, of course, be remembered that, as there are no children, the disastrous consequences

which would be the inevitable result of such a state of things on earth do not take place.

As for the institution of private property, the same permanence of individual life gives it quite a different form from that which it assumes under the conditions of death and succession. Personal property, indeed, in our strict sense of the term, can hardly be said to exist at all. There being no real family life—for the mere dwelling together of a childless man and woman can scarcely be called by such a name—a different social unit has been adopted. Three or four persons of each sex usually reside together, thus forming a household numbering six or eight, and 'property' has commonly reference to the household so constituted. The reader will see further on that this account of property is only correct for the *ancient* history of the planet.

With respect to property in land, very great troubles took place in the primitive times; and many ages elapsed before a

satisfactory settlement was arrived at. Hesperos is, in comparison with the earth, very sparsely populated. One hundred millions of inhabitants to forty millions of square miles of land, give but an average of two and a-half to each square mile. Now, if we assume that the area of England is about 50,900 square miles—an estimate which does not much differ from the fact—and that the population (A.D. 1730) is somewhere about seven millions, we have above one hundred and thirty-seven to each square mile. In an island of like dimensions in Hesperos—and one such really exists not far from the mainland—there are only 127,250 inhabitants.

Hence it would seem that the land supply is greatly in excess of the needs of the population. But there are such extraordinary differences in the eligibility of particular sites as places for residence, that great competition invariably arose for those spots which are specially favoured by nature. These disputes were much aggravated by

the conviction that the successful candidate had acquired a real, *bona fide*, and by no means fictitious perpetuity in the coveted abode. Thus th[illegible] bitter feuds only too frequently resulted in the eviction of the occupier by one or other of the well-known processes by which evanescence was brought about; either that of mortal lesion, which was commonly effected by somebody lying in wait for the envied tenant in some lonely place; or by the slow method of the metronomic balance, carried out by imposing on the victim a sort of social ostracism, refusing to hold any intercourse with him, or indeed supply him with the necessaries of life.

Matters at length proceeded to such extremities, that the governing bodies, in alarm at the depopulating process, passed a very stringent land law, limiting the tenure of any holding to the period of the Life Cycle, which, as we have already seen, averages one hundred years. At the end of

that period the estate was disposed of by lot, but there was no rule to prevent the incoming tenant from coming to terms with the outgoer. It must be distinctly understood, however, that, as the extent in area of each holding was strictly limited by law, there was abundance of land for everyone, and the dispossessed occupiers were merely transferred to another part of the country.

Permanence of individual life again is the cause of a marked difference in Hesperos from anything we experience on Earth, with respect to the tenures of the various occupations, trades, or professions, by the persons who exercise them. With us life is so short, and art so long, that when a man has once acquired the skill which is needful for his calling, he has but small opportunity, after having exercised it for a time, of ever learning another. But eternal tailoring or shoemaking, or even eternal writing of poetry, or painting, or playing on the fiddle, could not be thought of. Any attempt to carry out

such a permanence of occupation would quickly terminate in the evanescence of the patient by the operation of the metronomic law.

So here again the life cycle is usually adhered to; and on its completion the subject almost invariably adopts a new calling. Hence a strange state of affairs now in Hesperos—every man, and woman also, is not only Jack, but master, or mistress, of all trades. A friend told me that, during the last seven centuries of the ancient period, he had successively occupied the positions of miner, lamp-maker, cathedral-organist, confectioner, marine engineer, barrister-at-law, and maker of sun-pictures.

CHAPTER VI.

Of the Universal Language—Of the Universal Empire and first measures of the World-Parliament—Of the great progress of the Hesperians in all Physical Science; and of their fruitless craving after the Unknown God.

It has been already mentioned that the land surface of Hesperos consists of an immense polar continent, bordered with a very considerable number of islands, which vary greatly both in magnitude and configuration. The island populations naturally lived for a long period in complete separation from each other, and the hesperographical peculiarities of the continent, such as extensive chains of impassable mountains, produced a similar effect on the mainland. Hence, just as on earth, different nationali-

ties came into existence; and also, as on earth, each of these different nationalities had its own special language. But, as time went on, ships were invented, and communication between the islands and the continent became frequent. Commerce soon assumed extensive proportions; for in Hesperos, as in the earth, different regions abound in different products. Engineering operations also had been organized on a large scale, and these required much transportation of minerals and other materials of construction.

In the sixth millenary period, counting from the rational creation, a most important improvement was originated by the Hesperians; an improvement which brought still more notable changes in its wake. This was the adoption of one universal language for the globe, in room of the many which had sprung up in the different states. By this time they had fully realized their positions as permanent denizens of the planet, and the

advantages of a universal medium of communication were too obvious to need discussion. For this reason all the independent governments united in an international convention, and appointed a large committee of the most eminent philologists to consider the whole question. Pursuant to the report of this committee, a universal language was adopted; and the whole Hesperian world set to work, resolutely, at its study. In a very short time the polyglot system came to an end, and the language still spoken over the whole planet was an established fact.

The adoption of this universal language prepared the way for the union of all the separate states into one vast empire. Thanks to the reckless use of the two methods of evanescence, the original population of one hundred millions had, in the lapse of ages, dwindled down to little more than eighty millions, and eighty millions were not considered to be too large a number for a single administration. It is true they were

scattered over an exceedingly wide area; but, even at the time I speak of, an admirable system of communication had been organized. The sciences of mechanics and chemistry had made astonishing progress, and natural forces had been discovered and utilised for the purpose of locomotion. Of these, however, a fuller account will be given further on.

Here it will suffice to mention that, in the year 5784, the whole northern hemisphere was finally united under one central administration, chosen by the suffrage of the whole Hesperian population, male and female alike. For it should be noticed that, as a consequence of the female sex being exempt from the cares of maternity, they take a much larger share in the pursuits of the other sex than would be at all desirable, or even possible, with us.

Two highly important measures were at once agreed to by the world-parliament—first, the limitation of tenure of land to the

cyclical period of life, which had been already adopted by most nationalities, was made a universal law; and, secondly, very stringent penalties were annexed to the crime of procuring the evanescence of any one. Whether it was effected directly or indirectly no difference was made in the penalty, which was evanescence of the perpetrator by the ten-million-unit process applied by a cat-o'-nine tails.

Some years later another resolution was passed to the effect that it is inexpedient that any city should be allowed to exceed the limit of one hundred thousand inhabitants. This was issued rather as a recommendation than as a binding statute; but its expediency was so plain that it was almost universally adopted. The legislature were induced to pass it, in consequence of the congestion of the population at Lasondre, which had been unanimously selected as the metropolis and seat of government. The natural advantages of its situation, at

the head of a vast indentation of the continent by a bay of the central ocean, its magnificent scenery and delightful climate, rendered it so desirable a residence, that, at the time when this resolution was passed, the population had already reached the incredible number of two millions; it was still on the increase, and the resulting inconveniences were so manifold and severe, that it was further resolved to emigrate the superabundant citizens gradually, by the help of the cyclical law.

It must not be supposed that, during all the ages which had elapsed before the establishment of the world-parliament, speculation had not been rife among the Hesperians as to the nature and significance of the sudden and mysterious wakening into life which they had all simultaneously experienced. Quite the reverse was the fact. From the very earliest period, even from the time when small groups of them had invented the first rude forms of speech, the

questions how they had been formed, how summoned into life, whence had they come, and whither were they going, had been started, discussed, solved, the solutions rejected, abandoned for a time as hopeless, again resumed, and as zealously as ever re-discussed, with the same results as before. All were agreed that Something had made them, and had made them for some purpose. But that the Something either could not or would not speak to them, or hold any sort of communication with them was a patent fact, and this caused unutterable sorrow to the Hesperian mind.

In the earlier ages all persons were so much engrossed with the cares unavoidable for the supply of the necessaries of life; and, besides, were so deeply interested in investigating the physical laws of the world in which they were placed, that this increasing source of grief and anxiety did not produce as much effect upon them as it did in later times. But even then there was

hardly a small town to be found which had not, among its public buildings, some sort of a temple, with the inscription 'To the Unknown God,' whom they ignorantly worshipped and longed after, but in vain.

And, not only were they in this state of darkness respecting their Maker in consequence of the absence of any form of a direct revelation, but, being absolutely cut off from all knowledge of the remainder of the universe, by the physical structure of their atmosphere, they were also debarred from reaching Him through the medium of His works. The cloud-screen which shelters them from the fierce solar rays is impenetrable to vision, and thus, so far as any knowledge of the sun, and planets, and stars is concerned, they might as well have been a race of blind men. How it was that the canopy over their heads passed regularly in the course of about twenty-three hours and a-half through the two phases of brightness and darkness, was to them an inexplicable

phenomenon. All sorts of conjectures, hypotheses, theories, were hazarded, but none were accepted. The phenomenon was not even universal. At one place, near the centre of the continent, and for a considerable distance around it, the alternation of light and darkness followed quite a different law. For, instead of the change taking place at intervals of a few hours, light shone steadily for more than a hundred and twenty days, and was followed by nearly as long a period of darkness. It was an inscrutable puzzle. Some said that on one or two occasions a round and shining body had been dimly seen for a few moments through the mist, and that this might possibly have something to do with the illumination. But the fact was discredited, and the alleged appearance ascribed either to an optical illusion or deliberate mendacity. The observers, accordingly, being invariably treated with either contempt or personal violence, the theory disappeared.

Meanwhile great progress continued to be made in all departments of physical science. The various branches of mathematics were extensively and successfully studied, and the Hesperians became most expert geometers. The art of ship-building was soon carried to a high pitch of excellence, and various methods of propelling the vessels through the water were devised by the mechanical engineers. Some such artificial propulsion was almost indispensable, as the prevailing calms rendered the use of sails unavailable. One of the earliest motive powers extensively employed was the expansive force of the vapour of water, raised at a high temperature; and for many hundred years these curious ships were in actual use. I have seen several of them which are still kept in a vast marine museum at Lasondre. The vapour-engines propelled the ships either by means of great wheels furnished with boards which turned in the water, or by the action of one or more screws at the stern, which

worked much as the tail of a fish does in shoving the animal along. But the use of the vapour of water as a motor was found to involve a terrible waste of power, and it has been long since abandoned.

The progress of chemical science led to the discovery of an inexhaustible supply of force, which combines all the advantages of small cost, extreme portability, resistless strength, immunity from risk, and universal applicability. All this was obtained by the steady work and indomitable perseverance of three chemists who, contrary to usage, devoted themselves to this one branch of science for several consecutive cyclical periods of their career. Not being skilled in chemical learning, I was unable to comprehend the nature of their discovery; but I was told that it consisted in the application of certain laws of combination among various gases, each of which is easy to manufacture and store up.

CHAPTER VII.

Of the first attempt to pass the Equatorial Tornado; and its tragical issue—Of the attempt to pass the Cloud-Screen.

THESE improvements in ship-building and ship-propelling were naturally followed by a great development of the science of navigation, to which the mathematical powers of the Hesperians formed an invaluable auxiliary. And thus all that was possible for them to ascertain concerning the physical universe was soon learned. The circumnavigation of the globe was easily effected, for the shape of the continent was such that it could be made without going out of sight of land. Other and more adventurous ships were sent on voyages of discovery in a

southerly direction, and these made the discovery of the frightful tempest, mentioned before, which rages everlastingly in the equatorial zone. Not one of these ships succeeded in getting within two hundred miles of the equator itself. The crews reported unanimously that, even at that distance, the seas were simply terrific, and appeared to increase rapidly in violence towards the south. Some of them escaped from the vortex with extreme difficulty.

Whereupon two ships were specially constructed for the purpose of carrying out this exploration. They were of extraordinary strength, fitted with immensely powerful gas-engines, and provided with a seemingly inexhaustible supply of the necessary chemical agents. A crew of one hundred volunteers embarked in each, and they started together on their perilous expedition. After eighty-five days one of these ships returned, but only twenty-five of her crew were with her; the rest had

vanished either by mortal lesion or metronomic misery. The survivors reported the existence of an absolute pandemonium. The crew had succeeded in forcing the ship about fifty miles further into the zone of tempests than any of the former explorers. But further progress was hopeless. The man who before described to me one of the waves as a wandering cataract was among those who escaped, and his escape was a very narrow one indeed. He told me himself that when he got back into port his negative metronomic balance wanted but a few units of the point which would have terminated his career. And though they succeeded in forcing their way out of the tornado, this was only accomplished by putting on such power as threatened to tear the sides out of the ship. One of the Niagara-like waves fell on the sister-ship, and she was never seen again.

After this tragedy an act was passed forbidding all attempts to enter the South Sea.

Though many volunteers were ready to risk their lives, the legislature refused to sanction such peril.

So now the Hesperian knowledge of the Universe, at the period I speak of, may be shortly summed up as follows:—They knew that their place of abode was a spherical cap. Some had at first maintained that it was a circular plain; but this theory was soon exploded. The uniformly circular horizon visible at sea, and on every large plain, and the results obtained from a general survey of the continent by triangulation, combined to discredit the planar and establish the spherical theory. They knew, also, from pendulum and other experiments, that, at a spot coincident with the centre of the presumed sphere on which they lived, an unknown centre of force existed to which all bodies on the surface tended. And beyond this knowledge there was a great blank. What lay outside the cloud-screen or beyond the equatorial ocean had not

entered into the Hesperian mind to conceive.

The attempt to pass the ocean, and the hopes of thereby being enabled to gain some further knowledge of the works of the Unknown Maker, having been completely baffled, the attention of the Hesperians was at once concentrated on their only remaining resource—the possibility of penetrating quite through the cloud-screen. Could this be passed, it was possible that something might be found beyond it which would throw some light on the dark problem of their origin. But difficulties, seemingly insuperable, lay directly in the way of any such attempt. I have already mentioned that a chain of gigantic mountains extends in a south-easterly direction for several thousands of miles from the vicinity of the North Pole, and that several of the peaks of this chain attain an altitude of not less than twenty miles. But, to the ancient Hesperians, the real height of these peaks was

quite unknown. No man had ever seen their summits, for they were lost in the cloud-screen.

It might certainly be supposed that here was an obvious way of entering, and possibly penetrating through the screen. But a very short description of the physical features of the mountains will suffice to dispel any such notions.

All the engineers who had made a minute survey of the great mountain chain seem to have agreed that the particular peak which afforded the most favourable opportunity for ascent is one which is situated at about three thousand miles from the pole. It should be remembered that the level of the cloud-screen crosses these peaks at an altitude of about twenty miles, or, in round numbers, one hundred and five thousand feet.

At the place referred to, the several stages of the ascent would be as follows:— First, about twenty thousand feet of easy

slopes lead to a wide table-land, a resort much frequented by Hesperian households on account of its delightfully cool and bracing climate. Then follow ten thousand feet of steep ascent to the glacier region. This region, which is commonly regarded as the most formidable obstacle to success, extends, at an average inclination of forty-five degrees, to a vertical height of twenty thousand feet more. The strata of rain-clouds, which are as different in formation from the cloud-screen as water is from smoke, never attain a greater elevation than ten miles; so here we have the limit above which neither rain nor snow can be deposited, and where, consequently, the glacier region ends.

This brings us to an altitude of fifty thousand feet above the level of the ocean, and next comes the region of precipices which stretch up to the cloud-screen. This final ascent is divided into three gigantic steps; the first, and smallest of them, about

ten thousand feet high, leads to a wide plateau; next comes the most awful of the three, not less than thirty thousand feet, terminating in a much narrower terrace, from which starts the last of the steps. This is not exactly a precipice, but a slope of seventy-five degrees; about fifteen thousand feet of this are visible; it then enters the cloud and is lost to view.

The above description has, I trust, made it manifest that an attempt to reach the screen by the mountain route would prove a very arduous undertaking. Vast labour and cost would be essential, and here the advantages of the great world-parliament became exceedingly conspicuous. The enterprise was cheerfully voted to be a world-work. There was no fear that it would come to an untimely end through lack of any material supplies. A committee of the ablest engineers was appointed to examine and report on the most favourable spot for commencing operations. They

were not long in coming to an unanimous decision, and the works began.

It was resolved to drive a tunnel the whole way from the table-land under the glacier as far as its upper edge. This formidable work was found to be quite indispensable, in consequence of the incessant avalanches and ice-falls which, issuing from the glacier, fell down the steep slope to the table-land. Indeed, they were obliged to start the tunnel at a distance of fully five miles from the foot of the slope, as a security against the blocking of the entrance. Running nearly horizontally for these five miles, it then bent upwards at an angle of forty-five degrees, and, after a total rise of thirty thousand feet, issued at the top of the glacier, close to the foot of the first step in the series of precipices. The excavation of this tunnel, which was nearly thirteen miles long, was an exceedingly formidable task. But it was undertaken with such zeal and energy, and carried on

with such perseverance, that the seemingly insuperable obstacles were at last overcome. Gangs of experienced miners, superintended by skilful engineers, relieved each other, night and day, at the work. Every material required was supplied in profusion. The new dynamical agent which had supplanted the vapour of water as a motor force, had been rendered available for instantaneous percussive action, after the manner of gunpowder, but with incomparably greater energy; and this was extensively utilised for the removal of the rocks. Still, as it was not possible to work at the tunnel except on one face, several years elapsed before the miners emerged into daylight at the top of the glacier.

Here, before beginning the assault on the region of precipices, an immense depôt was established. The tunnel was laid down with double lines of the same sort of parallel steel rods as those which I had noticed on the road at Lucetta. On these ran a series

of small trucks, driven by an endless chain which was moved by the gas engine beforementioned; and by means of these all the stores required were easily brought up.

At the height of fifty thousand feet, which had now been reached, little or no difficulty in breathing was encountered. This was probably owing to the extreme density of the Hesperian atmosphere, which, as was noticed before, is so great that the mercury in the tube of Torricelli, at the sea level, stands at an average height of more than fifty-nine inches. Moreover, the slow rate at which it was observed to fall, during the ascent of the last few thousand feet, gave the engineers good hope that, even at the summit, a sufficiency of air to support life would be found.

The ascent of all the three stages of the precipice region was effected by the process of cutting open galleries, inclined at an angle of thirty degrees, in the face of the vertical cliff. The region of ice and snow having been passed, tunnelling was no

longer necessary. Four zigzags, each a mile long, sufficed to reach the first terrace, where another depôt was constructed; and a few years' more labour, and about a dozen similar zigzags, accomplished the ascent of the tremendous middle precipice, thus bringing them within fifteen thousand feet of the cloud-screen.

As the great work neared its completion, the anxiety and excitement, not only of those actually engaged in it, but of the entire population of the planet, rose to a scarcely conceivable intensity. It was now plain that the cloud level would be reached; but no light had as yet been thrown on the question whether the mountain top did or did not pass through the cloudy stratum. If it did not, all their labour of years had been merely thrown away, and they were left as before in absolute ignorance of the external universe. And the fact that the ascent which still remained to be scaled, was not absolutely vertical, but, sloping a little, even at its foot on the last terrace,

appeared to diminish its inclination as it approached the cloud, gave reason to suspect that the actual summit of the mountain was not very far off. It may be added that the cloud itself, as they came nearer, presented an unpromising appearance of great density.

So, the final depôt having been constructed, the work on the last series of galleries was begun and carried on with greatly increased vigour, till an altitude only a few yards lower than the under surface of the cloud was gained. At this place the angle of inclination of the cliff had eased off to sixty-three degrees, and it was thought advisable, in view of the unknown possibilities of the mountain inside this thick screen, to establish, by blasting away the rock, a level surface of sufficient extent to enable them to build yet another storehouse, before venturing to proceed with the sloping gallery.

CHAPTER VIII.

Of the great courage of three engineers—How they passed the Screen and saw the Host of Heaven—How they further discovered a Disk of Unknown Fire—Of the reception of the news throughout the world—Of the construction of a mountain Observatory; and of the rapid growth of Astronomical knowledge.

THE levelling of the rock was necessarily a work which required a good deal of time; and, while it was proceeding, three of the engineers formed the daring project of scrambling up the cliff, into the cloud, and endeavouring to penetrate through it by themselves. All the three were in the stationary period of life, and, consequently, in the possession of full bodily strength and activity. The cliff was in most places rough enough to give good hold for both hands and feet. Still, to venture on a climb

through a dense mist, on the face of a nearly precipitous and wholly unknown mountain, where a single slip would be certainly followed by immediate destruction, was regarded by their comrades as too hazardous to be thought of.

But the three were not to be dissuaded—I ought, perhaps, to mention that it is to one of these daring men I am indebted for the account of the whole expedition. Their preparations were soon complete, for their equipment was very simple; each of them took about one pound weight of some sort of food in a highly concentrated form, and a flask containing a pint of water. Water, it may be observed, was valuable at this elevation, for every drop had to be carried up from the glacier region. Each man also carried a coil of about five hundred yards of fine, but very strong twine. This was intended to be used as a clue to guide them back to the camp. Fixing an end of one of these coils to the wall of their store,

they started on their perilous journey at two o'clock in the afternoon. Without very much difficulty they scrambled up to the edge of the cloud, and there disappeared from the sight of their friends, most of whom believed that they had gone mad.

As a proof of the great care and skill with which the works had been carried on, I may here remark that, up to this time, but one fatal accident had occurred. This was during the construction of the galleries on the face of the thirty-thousand-feet precipice. The top had been nearly reached, when a man, who was heaving a fragment of rock over the edge, lost his balance, and fell with the fragment. His horrified comrades watched his terrible fall, unbroken for about twenty thousand feet; there he touched a projecting spur of the rock, and evanesced instantly, mortal lesion having been made.

As soon as the three adventurers had entered the cloud they had the satisfaction of finding that, at all events, one possible

obstacle, an obstacle which might have proved fatal to the success of the whole undertaking, had no existence. It had been feared that the atmosphere of the cloud-screen might turn out to be unfit for the support of animal life. But they found no difficulty in breathing. The extreme tenuity of the air, of course, rendered active exertion very laborious and exhausting, and thus, though the rock was not unfavourable for climbing, their upward progress was exceedingly slow. They often encountered difficulties which were quite insuperable, and which compelled them, retracing their steps, and recoiling their clue, to seek another line of ascent.

As they slowly attained a higher altitude, it became quite plain that the angle of inclination was steadily becoming less. Before long it reached fifty degrees, and this change of slope, though it eased their climb, caused great apprehension to the climbers, for it seemed to indicate an approach to the

top, and certainly no signs of any abatement in the density of the mist had yet become visible. To reach the summit while still wrapped in the cloud would be the death-blow to all their hopes.

This angle of fifty degrees continued unaltered for a considerable distance. At about six o'clock, after four hours' hard work, they came to the end of their second coil of string. Night was evidently coming on ; they sat down on a small ledge of rock, and after taking some refreshment, they fastened their last coil to the string already paid out, resolved to proceed till it also came to an end.

A few hundred feet further on the slope suddenly grew much steeper, and this, requiring additional exertion in the very thin air, soon produced such exhaustion in two of the party, that they were obliged to stop again and rest.

By this time it had become quite dark, and the third engineer, who was still in as

vigorous a condition as when he started from the camp, imagined that he perceived overhead through the mist what seemed to be small twinkling lights. Immediately he resumed the ascent, and still holding the clue, climbed a few yards higher up the mountain. And then he stopped and held on to the steep rock with both his hands, while he looked at the great Host of Heaven shining in the black depths of space. The cloud terminated above as abruptly as it began below. He had reached the edge, and the vision came upon him suddenly.

When he recovered his speech he called softly to his companions to follow up the clue, for the cloud was passed. They struggled up with difficulty, and then all three stood together in silent wonder at the spectacle before them. They had not the slightest conception of its meaning; what the lights were; whether connected or not with their own abode; what were their distances; were they living beings—for a falling star, which

suddenly flashed across the sky, suggested this question. Seen through that exceeding thin air, the splendour of the stars and planets was greater than what we, who have only seen them through a much denser medium, are able to conceive. Conspicuous above them all in beauty and brightness was the earth itself, which, being then in opposition, was at its least distance from the observers. When in that position, the earth presents to the Hesperians a much more brilliant object than their planet does to us. For, though not receiving as great a supply of light from the sun as Hesperos does, this deficiency is far more than balanced by the fact that, when in opposition, the whole of the illuminated face of the earth is visible at Hesperos, while only an exceedingly thin crescent of Hesperos is visible at the earth.

Notwithstanding the intense coldness of the air, they stood for a long time contemplating the wondrous illumination. At last they became conscious of a change in the

scene. The small lights began to grow dim, while the light diffused around them increased. The upper surface of the sea of cloud which lay stretched out on all sides, a few feet below them, gradually manifested itself as a smooth greyish-coloured plain. Behind them, towards the east, the mountain still sloped steeply up; but, at no great height above their heads, the top was distinctly visible. They resolved to continue the ascent, having first fastened the end of their clue, which was now unnecessary, to a conspicuous projection of rock about a hundred feet above the upper cloud surface.

The remainder of the climb, which was hardly a thousand feet more, was easily accomplished by the three engineers, now rested and reinvigorated by success. And, on reaching the summit, which proved to be a small and nearly level platform of rock, they were rewarded with another spectacle totally different in kind, but fully as astonish-

ing as that which met their eyes when they emerged from the cloud.

By this time every trace of the heavenly lights had vanished, and they beheld on all sides of them a perfectly uniform and level plain. At one point, towards the east of this plain, an object was visible which at once absorbed the entire attention of the three. A very small segment of a fiery circle bordered on the horizon, shedding a track of bright light over the cloudy sea, which lay about a thousand feet below them. As they gazed and gazed on the fiery segment, it soon became plain that the segment belonged to a burning circular disk which was rising out of the cloud. The segment quickly grew into a semicircle; a few minutes more, and the whole disk became visible, left the cloud, and mounted slowly in the sky. At the same time the vast plain took a snow-white colour of dazzling radiance, and the heat emitted from the disk became so intense that the three mountaineers retreated quickly into

the shadow of the peak by descending a few steps on the western side. One thing had become quite clear to them, namely, the cause of the daily illumination of the cloud-screen. It was evidently the great disk of unknown fire, which was still mounting in the air and travelling towards the west.

Obviously no delay was to be made in descending to the camp and communicating to their comrades the tidings of the complete success of the expedition. They were obliged to use great caution on the downward journey. All mountaineers are aware that the descent of a very steep slope, where a single slip would be fatal, is a much more ticklish process than its ascent, insomuch that some have ventured to affirm that few great ascents would be made if the descent came first. By two o'clock in the afternoon they had accomplished the descent of the open part of the mountain; they easily found the string fastened to the projecting rock, and, re-entering the cloud, and guided by the

clue, they very slowly, but without accident, found their way back to the camp, which they reached about six o'clock in the evening.

The reader will easily understand the joy which the safe return of the three engineers occasioned in the camp, and the intense interest with which their story of the marvels visible beyond the cloud was listened to. Their report was hastily committed to writing, sent down by the tramways, and circulated through the world with all speed. Operations were instantly resumed at the gallery, which had still to be driven through the cloud stratum. It was resolved to continue it right up to the top of the mountain, for the report of the engineers rendered it quite plain that an extensive observatory must be established there, and that a corps of the ablest mathematicians and best trained physical observers must take up their permanent abode in it, in order to investigate the nature and

meaning of the myriad smaller lights and the great fiery disk.

Meanwhile, during the progress of the works, many of the artificers who were in the prime of life, repeated the ascent which had been so successfully accomplished by the three pioneers; with the guidance of the clue, this was now a comparatively easy undertaking. Before the lapse of three years the first Hesperian observatory had been actually built, and a body of twenty-five of the ablest scientific men entered upon the study of practical and theoretical astronomy in that elevated abode. As a protection against the violence of the unscreened solar rays, a cavern was excavated in which the observers could pass the daytime at their calculations, and, issuing forth at nightfall, they laboriously watched the stars.

The speed with which these men found out the clue to the explanation of the complicated phenomena before them, would be quite incredible to anyone who did not bear

in mind the remarkable conditions under which they worked. This was no case of a gang of stolid country bumpkins contemplating for the first time the starry heavens. Every one of the observers was an expert geometer, was perfectly familiar with all kinds of algebraical calculation, and had been trained for centuries in every type of physical observation and experiment. Before the discovery of the heavenly world telescopes had been invented; but, being adapted for use on the surface of the planet only, they were all of small size. The vast field for observation now disclosed, created a demand for a much more powerful class of instruments, and the stimulus thus given to opticians soon showed its effect in most important improvements in the manufacture of glass. Before many years were over, high class astronomical instruments were attainable, including those by which angles can be measured to an extraordinary degree of minuteness.

Thus the great rapidity with which this able band of observers succeeded in reducing the chaos of the fields of heaven to an orderly cosmos may be explained. I need not attempt to recount the successive steps in their marvellous progress. A very few days after they began their systematic labour, one of them suggested the real rotation of the planet on her axis as the cause of the apparent diurnal movement of the celestial sphere. This conjecture was speedily verified by pendulum experiments at the pole. Then followed the discoveries of the distinction between stars and planets and satellites; the distances and magnitudes of the planets; the position of their own world among them, and the dependence of the whole solar system on the sun. In short, by the close of the ninth millenary period, the Hesperian astronomy was a long way in advance of anything even now known on earth.

In the ancient history of Hesperos this discovery of the external world forms by far

the most important epoch, and, for several centuries, the study of astronomy seems to have absorbed a great part of the energies of the inhabitants. Two other places were found on the mountain chains of the north, where, by going through the same kind of works as those detailed above—some of them involving even greater difficulties in their execution — peaks which rose above the cloud were reached, and observatories built upon them. It thus became possible to compare observations taken at different parts of the surface, and astronomical discoveries proceeded with still greater rapidity.

CHAPTER IX.

Of the development of World-Weariness in Hesperos; and of the second attempt to cross the Equatorial Tornado —How the Forlorn Hope succeeded, and discovered a City of the Dead—How the terrible mystery of Evanescence was explained; and how the crew set out on their return.

But, notwithstanding the signal success which had attended their labours, there can be no doubt that during the next thousand years a general feeling of gloom and despondence gradually settled down over the Hesperian race. That the brilliant discoveries of the astronomers had failed to throw the faintest glimmer of light on the question of questions — Who was their Maker?—was a fact which could not be disguised. An answer to this was as far off as ever—further off, indeed. They had

learned the enormous extent of the universe, and, as a consequence, that the Hesperians, so far from exhausting its contents, were no more than insignificant specks in its unfathomed deeps. In the vast profusion of worlds they felt themselves lost. If their Maker had charge of that vast universe, he might well have forgotten them altogether. Why, then, should they not depart from life? The door of exit was always open. A fall down the nearest precipice was always easy, and the instantaneous dissolution of the body was an unfailing remedy for every ill.

This feeling of discontent with life, or general world-weariness, reached a climax in the concluding years of this period; and its existence in the mind of a small band of practical engineers was certainly the main cause which led to the terrible discovery that placed an indelible line of distinction between the ancient and modern Hesperian histories.

Although the northern hemisphere only was accessible for exploration, it was by this

time perfectly well known that the planet is a sphere. Hence they considered it not at all improbable that, to the calms of the north, a similar condition in the south might correspond; and that the chronic hurricane which had hitherto barred the passage to the southern ocean might prove to be confined to a zone not exceeding a few hundred miles in width. Should this be the case, it might perhaps be passed, and a southern continent discovered. This would greatly develop astronomical science; nothing less than a hemisphere of unseen stars might be brought into vision. Moreover, a transit of Mercury across the face of the sun would take place in a few years; and, in order to utilise this, a place of observation in the southern hemisphere was essential.

It occurred to one of these engineers that, though no ship floating on the surface of the ocean could possibly live in the equatorial tornado, it might be practicable to devise a submarine vessel which, by sinking to a very

great depth below the surface, could traverse the four or five hundred miles of raging cataracts, and then, emerging from the depths, might find a smoother sea.

It was plain, however, that whoever ventured on such service must be content to incur imminent risk of utter destruction. No one could venture to guess how far downwards the seemingly preternatural disturbance might reach; or what horrors fatal to every form of life might be met in those frightful abysses. So, except for that feeling of weariness of life which was fast growing through the world, it is not at all likely that a body of volunteers, sufficiently numerous, could have been found for a service of such exceeding peril. In one respect, indeed, but only in one, this new enterprise had not as terrible an aspect as that which had been undertaken by the earlier and unsuccessful voyagers to the south. These earlier voyagers had actually ventured on the Infinite, for they had no clue to the shape or extent

of their world; but, thanks to the astronomers, it was now well known that the planet is, at all events, bounded in every direction.

The engineer communicated his plan to some of his comrades, and, after trying a great many experiments in submarine navigation on a small scale, they succeeded in constructing a model boat, which promised well for success. Their next step was to collect a sufficient number of volunteers; they considered that fifty would suffice. Owing to the desponding feeling then prevalent, the fifty, a forlorn hope, were soon found. They then applied to the world-parliament for the funds necessary for building and fitting out the ship, which would be a very costly undertaking, in consequence of the enormous strength which would be requisite to resist the water pressure at the great depths to which they would be constrained to descend. But, in the interest of scientific discovery, the funds were readily supplied; the works were commenced without

any delay; and, in about two years, the ship was complete. It was lavishly supplied with stores of food, and force, and every requisite that could be conceived; and the fifty embarked and started for the south; none of them expecting, or indeed much wishing, ever to return.

All of them were excellent engineers, and practised astronomers; indeed the hope of extending the field of the latter science had certainly some influence in stirring them up to their expedition. They continued on the surface of the water till they approached the stormy region. Into this they penetrated, still keeping on the surface, till the violence of the waves became so great that it was no longer possible to steer the ship. They then stopped the propelling engines, and opening the valves which admitted water into the tanks, sank slowly into the deep. At the depth of five hundred feet they found the sea quite still, and they started the propellers again. But, a few miles farther on they

had to go five hundred feet lower. As they approached the line of the equator itself they were obliged by degrees to go lower and lower, till at last an immersion of two thousand feet was reached; and, at this depth they forced their way for about two hundred miles.

The ship behaved admirably. Notwithstanding a pressure exceeding a thousand pounds on the square inch, not a trace of a leak could be discovered. At last they thought they might venture to rise a little; so, by altering the inclination of the propellers they gradually ascended about a thousand feet without any unpleasant result. At this height, signs of water disturbance rendered it inexpedient to continue their upward progress till they had made another fifty miles of their voyage. They then ascended five hundred feet more; at that depth the water was rough, but practicable. Fifty miles further, they ventured to force the water out of the tanks, and rise to the surface. This they did very slowly and

cautiously, and on emerging they found that the zone of tornadoes was passed. The sea was still exceedingly rough; but looking back towards the north, it was easy to see, from the much greater violence of the waves in that quarter, that they had left the equatorial hurricanes behind them.

They were now in the southern hemisphere, and, as well as they could compute, about two hundred and fifty miles south of the equator. The total width of the belt of storms, at the place where they had crossed it, they estimated at five hundred miles. As they proceeded towards the south, the sea became smoother and smoother, till they reached a region of nearly perfect calm. They resolved to hold on their course, due south, till they either reached land or the South Pole itself.

On the ninth day after their emergence they sighted land. The country was evidently mountainous; overhead, the cloudy screen continued unbroken, and seemingly

at the same elevation as in the north. Soon the ship was near enough to the shore for the crew to be able to discern unmistakable signs of life; and, on rounding a headland, a city of moderate size came into view. The style of the buildings was in no way different from that which was familiar to them at home. As they cast anchor a few hundred yards from the shore, they could see that the pier was densely crowded with people, who had been evidently attracted by the strangely-shaped vessel.

Presently one of the crew, taking up a spy-glass, leaned on the handrail and took a steady look at the people on the pier. He had not gazed for more than a few seconds when he suddenly turned as white as a sheet, staggered back a couple of steps, and, gasping for breath, handed the glass to the man beside him. The captain asked him what was the matter—'It is a City of the Dead,' he stammered, in a voice all but inarticulate with terror.

A like expression of horror came over the second man's face, as he also looked through the telescope. And no wonder at it. The people who were standing on the pier had lived with them in the north, and were believed to have vanished from life for ever. A feeling like that which arises on earth in the presence of a ghostly visitor came over the crew. They were plainly face to face with some terrible mystery, which was now to be cleared up.

Meanwhile a boat with several rowers pushed off from the pier and came swiftly towards the ship. As she approached, several of the engineers recognized in the steerer the man who had perished on the awful precipice which leads up to the great observatory of the north. When the boat came within hail, this man shouted, 'We have been expecting you for some time, and we congratulate you on your submarine passage.' So it was plain that these mysterious people knew all about the expedition.

They saw the consternation of the engineers, but evidently did not reciprocate their confusion. On the other hand, all seemed highly delighted at the arrival of their old friends. More boats came out to the ship, and the crew were speedily landed. The citizens received them with great kindness; took them hospitably into their houses, and, when the astonished guests had rested, and recovered a little from their state of utter stupefaction, the supposed ghosts communicated to them the history of their adventures in the southern hemisphere.

The substance of what they learned was as follows:—The phenomenon of evanescence, hitherto supposed to be the final destruction of the subject in which it takes place, is only the first step in a much more complicated process. The evanescence itself consists in a sudden disintegration of the molecules which compose the body. But these disintegrated, and therefore invisible, molecules are really endowed with an affinity or attrac-

tion which tends to the south pole of the planet. Just as on earth, the magnetic needle turns into the magnetic meridian, so on Hesperos those organized molecules which enter into the structure of a rational animal, when freed by disintegration, instantaneously seek the South Pole, the transmission taking place with the exact velocity of light. On reaching the pole, reintegration is equally instantaneous; so that in Hesperos we may say that the death, decomposition, and resurrection of the body form three consecutive steps in one connected series of events, the whole of which is accomplished in a single instant.

Evanescence, then, in the northern hemisphere, and indeed in the southern also, is nothing more nor less than instantaneous transference to the South Pole. The reintegrated body is, with one most important exception, an exact reproduction of the disintegrated original. The exception is this: any bodily organ which has suffered a lesion

of any kind is restored in its primitive healthy condition. Had this not been the case, many a man would have been doomed to the shocking fate of languishing in a maimed and mutilated state for evermore. The two laws of evanescence which have been observed in the north are equally valid in the south; but it should be remembered that the transference is always to the *South* Pole, no matter in which hemisphere evanescence occurs.

Hence it is obvious that, before the arrival of the submarine boat, the conditions of population in the north and in the south respectively were directly contrasted. In the former there was a constantly diminishing number which could not be increased; in the latter a constantly increasing number which could not be diminished. But it was quite plain that, assuming the return voyage of the submarine ship to be practicable, equilibrium would soon be restored.

Such were the main facts communicated

that evening to the astonished engineers. They all retired to rest in their new quarters half petrified with amazement and horror. The gate of exit from life was shut and barred—or rather, none such had ever existed. What was supposed to have been one had no such real significance; and if there was one anywhere it had still to be found.

To their question, How had the southerners become aware of their projected submarine voyage? their hosts replied that one of the northerners who had been evanesced by an accident while the ship was building had, on arrival at the pole, communicated the plan. Indeed, in this way, by the frequent arrivals from the north, the southerners were kept well posted up as to everything which took place at the other side of the equator, and had learned all the grand results of the new astronomy.

The engineers resolved to lose no time in making the return voyage; and they offered

to take with them, as passengers, any, to the number of fifty, who chose to revisit their former habitations; more than fifty they could not easily accommodate. The offer was gladly accepted. Among those who returned they brought the oldest inhabitant of the south, the victim of the Hesperian Cain, whose untimely extinction, just 9997 years before, had led to the discovery of the first law of evanescence. He was now, to all appearance, in the twenty-fifth year of his age. Also three of the crew of that ill-fated ship which perished in the abortive attempt to cross the surface of the equatorial sea accompanied them.

CHAPTER X.

The oldest inhabitant of the South relates its history—How the awful intelligence was received in the North.

As the return voyage occupied several days, the engineers had a good opportunity for obtaining from the passengers much interesting information concerning the past history and present condition of the southern hemisphere. In both physical structure and configuration the northern and southern portions of the planet are very similar; a great polar continent, with many islands off the coast, being the leading feature common to both. The south pole itself is situated in the middle of a very wide and fertile valley, surrounded on all sides by gently sloping hills. The climate is delightful, especially

in the spring and the autumn; and this attraction, combined with the fact that the pole, hitherto, had been the sole port of ingress to the hemisphere, caused its selection as the site of the southern metropolis.

The oldest inhabitant proved invaluable as a historian. His account of the origin and gradual growth of the city was as follows:—'When I found myself extended on the ground at the pole, I had no conception of what had happened, or even that I had been moved from one place to another. I remembered distinctly the fight in which I had been engaged, my own exasperation, and the furious gestures of my antagonist. But he had vanished altogether, and the place where I now found myself was quite different from the scene of the combat. I got up and looked around me. The country was similar to my former place of abode; the same abundance of fruit-trees; the same pure streams of water; but the hills and mountains were quite differently

shaped and grouped together. I could see no signs of rational life; the silence was broken only by the sweet singing of the birds, of which, as before, there were many kinds.

'While I was still lost in astonishment at what had occurred, there suddenly appeared on the exact spot of ground where I had, a few minutes before, awakened into new life, another man extended on the grass. An instant before not a trace of him was visible. For a moment I imagined he must be my recent antagonist, and I instinctively prepared to renew the battle. But he turned out to be a man I had never seen before; his speech was unintelligible to me, as was mine to him. We separated; he walked off to seek his fortune elsewhere, while I remained in the neighbourhood of the strangely-haunted spot which is now known as the South Pole.

'Before long more arrivals took place in the same mysterious manner. I must neces-

sarily omit details: it will suffice to say that before many years had expired a population amounting to several thousands surrounded the pole. As most of these men, and women also, arrived in consequence of mortal lesions received in fights, it turned out that they were, as a general rule, of rowdy and quarrelsome dispositions, and thus for many centuries the lovely country was little better than a pandemonium.

'But by degrees things began to improve. Among the importations there was always a respectable minority of orderly persons, whose evanescence had been brought about either by accident, or when honestly fighting in self-defence. Order has always a tendency to prevail over disorderly violence. The orderly party combined and formed a compact body on the side of regular government. A sort of vigilance committee was established to keep guard over the pole itself. The special function of this committee was to take charge of all fresh

arrivals, to explain to them the actual state of affairs in the south, and to enlist them on the right side.

'Thus, at last, the anarchical period came to an end. After the establishment of the universal empire in the north, and the consequent cessation of international war, immigration to the South Pole diminished enormously. Such things as batches of several hundreds arriving in the course of a few minutes from a field of battle were no more heard of. The rowdies themselves showed signs of reformation; they were never intrinsically bad, and they are now as well conducted as any in the south.

'The comparatively few who still continued to drop in from the north proved of inestimable service. As you are aware, they taught us the universal language, and they have always kept us well informed in the history and discoveries of the larger world. Owing to the great congestion of population at the metropolis which naturally

resulted from the conditions of immigration, it was found necessary, about two thousand years ago, to adopt very stringent measures for its abatement, and great numbers of the inhabitants were removed to other parts of the country. Since that time the northern limit of one hundred thousand has been rigidly observed.'

Such was the main part of the information given to the crew of engineers as they pursued their northern course through the smooth waters of the southern sea. When the equatorial zone was reached they descended once more beneath the waves, and by the same process and with no more difficulty than before effected its passage. On the twenty-second day, after a total absence of fifty-three days, they arrived in safety at the port of Lasondre.

By this time their return was expected in the northern metropolis, and the anxiety of the people had risen to very great intensity. As the ship was entering the harbour the

whole population swarmed on the quays. The city was decked with every sign of rejoicing, and the sweet-toned peal of the great bells which hung in the towers of the vast world-cathedral, erected in honour of the Unknown, filled the air with their music. But when the engineers landed with their company who had returned from the dead, and when the knowledge of what had been found spread into the city, all was hushed in silence. Joy at the safety of the crew, and at the unexpected sight of their departed friends, was none the less; but awe was the predominant feeling. The certainty of everlasting life, and of the shutting for ever of the only door of exit, were not to be lightly received. The tremendous intelligence was immediately communicated to the world, and the Modern History of Hesperos began.

CHAPTER XI.

HERE BEGINS THE MODERN HISTORY OF HESPEROS.

How the two hemispheres were amalgamated—Concerning the Sympathetic Telegraph; and how the great astonishment of the Hesperians at the first sight of the Doctor was fully explained.

On the morning after the return of the ship the parliament met, and immediately passed a vote for the construction of a large fleet of submarine vessels, to be built on the pattern of the original whose voyage had proved so successful. It was evident that intercourse on a very large scale would take place between the two hemispheres. The southerly journey, as was now well known, might be effected in quite a different way; for an energetic blow on the head provided

the intending traveller with a swift and gratuitous passage to the South Pole. But there were many objections to this mode of transit; and, at all events, the return journey was strictly confined to the submarine route.

So the new fleet was at once put on the stocks, and all the Hesperian dockyards were provided with work in abundance for several years. Meanwhile the original ship was kept on hard duty. On each voyage, and in both directions, she was crowded with passengers, some eager to see the new discovered world, others longing to revisit the scenes of their former life. Presently, as one of the results of the discovery, there arose an important question in international law. Whether those persons, now residing in the southern hemisphere, and subjects of its government, but whose evanescence had taken place subsequently to the establishment of the universal empire of the north, were still bound by their northern allegiance,

or, had the fact of evanescence discharged them of that allegiance, thus leaving them lawful citizens of the south.

The question involved some nice points; but fortunately there never was any occasion to bring it to an issue. For, the advantages arising from the amalgamation of all the northern governments into one universal empire were so manifest, and were so thoroughly appreciated even in the south, that the union of the two hemispheres in one universal planet empire very speedily took place. In fact it took place immediately after the important preliminary question was settled, In which hemisphere should the seat of the central government be fixed? Many circumstances seemed to suggest that it should be in the south, and at the pole.

The explanation of the real significance of evanescence which ultimately revolutionized Hesperian life, was not the only piece of astounding intelligence imported into

Lasondre by the submarine ship, on her first return voyage. Even in the midst of the general stupefaction occasioned by the return of the dead, the announcement of another extraordinary discovery excited the attention of the citizens. This was no less than a method whereby instantaneous communication might take place between two persons no matter how widely separated they might be on the surface of the planet.

The discovery was made in this way. About one thousand years earlier, a man who was an earnest student of chemical science, was engaged in trying some experiments at Lucetta. These experiments were of a highly dangerous character; and one day, notwithstanding all precautions, a terrific explosion took place. So violent was it, and so minute were the fragments to which the experimentalist's body was thereby reduced, that there was scarcely need for the first law of evanescence to operate in removing the remains from the

land of the living. However, of course, it *did* operate, and the chemist was duly re-integrated at the South Pole. He was, as usual, received by the vigilance committee, who explained to him, as they were in duty bound to do, the circumstances of his new life.

The chemist, nothing daunted, proposed continuing his experiments; and the southern authorities, hearing the nature of them, and suspecting that a considerable series of sudden disintegrations and re-integrations of his body were likely to result, kindly assigned him a laboratory quite close to the pole—a fact which materially facilitated the memorable discovery which soon rewarded his labours.

At a distance of a few miles to the east there is a hill which is mainly composed of a singular-looking mineral which has not, as yet, been found anywhere else in the planet. This mineral occurs at a very small depth below the surface, in separate masses,

none of them exceeding ten pounds in weight, is of a bright green colour, and possesses the remarkable property of very easily splitting into exceedingly fine rods, no thicker than an ordinary needle.

Desiring to make an analysis of this mineral, which the southerners called molygdon, the chemist procured a great quantity of these rods, cut them into lengths of a few inches, and tied them up tightly in bundles which he left for some days on a shelf in his laboratory till he was ready to examine them. When he was at leisure, he took one of these bundles, untied it, and threw the little rods into a flat vessel full of water, in which they floated, their specific gravity being small. To his great surprise the rods speedily assumed positions parallel to each other. He twisted one of them a little out of its direction, whereupon all the others turned through the same angle, so that the parallelism remained.

At last, after a long and careful series of

experiments he succeeded in establishing the following momentous law : — Two needles of molygdon which have been kept in close contact for not less than thirty-six hours at any spot not exceeding three hundred yards' distance from the South Pole, possess the property of always remaining parallel to each other, whenever they are freely suspended in parallel planes, no matter how they are situated with respect to each other on the surface of the planet.

This discovery afforded an easy mode of immediate communication between any two places in the southern hemisphere. All that was needful was to suspend two needles, rendered sympathetic by the above process, on pivots in the centres of two circular cards. A code of signals was easily devised, sufficient for ordinary purposes; and, by placing the letters of the alphabet round the edges of the cards, verbal conversation could be carried on.

Soon after the discovery of this important

law of nature, the southern parliament resolved to utilise it on a vast scale by founding an institution which would enable any two persons, even without being in possession of two directly sympathizing needles, to communicate with each other. It was estimated that the population of the south was not much under twenty-five millions. Accordingly, twenty-five million pairs of these sympathetic needles were manufactured, and each needle was mounted in a suitable circular box. This was done at the national expense; the intention being that one box should be given to each inhabitant of the south, the corresponding box being deposited in a building to be erected in the metropolis for the special purpose of the safe custody of the duplicates. As each box was a small cylinder, not exceeding three inches in diameter and one inch in height, no very large space was required for their accommodation. These duplicates were all arranged in order and numbered;

the corresponding number being stamped on each sympathetic box.

The process of conversation thus became very simple. For example, No. 23,482,657 wishes to say a few words to No. 10,334, who is somewhere, but where he knows not, in the southern hemisphere. He sends his message to the central depôt. The stirring of the needle there rings a small bell, and displays a white mark on the front of the box. The clerk on duty takes it down, reads the message; then taking box No. 10,334, he repeats it to the required correspondent. Of course, any two particular friends who may have occasion for frequent conversation can have, in addition, two special needles with which they can communicate directly.

All the passengers in the submarine ship were provided with these boxes, and, on their arrival at Lasondre, the question, whether the sympathetic influence extended to the northern hemisphere, was at once

decided in the affirmative. Communication with the South Pole was just as easy from the north as from the south side of the equator.

The South Pole being thus the most convenient centre for communication with the entire surface of the planet, had evidently strong claims for selection as the site of the universal metropolis. And before two years, dating from the return of the ship, were over, the whole planet was united in one vast empire, and the seat of government fixed at Australis, as we may style the city of the South Pole.

The united government at once extended to the whole world the signalling system which had been so successfully carried out in the south; this, of course, involved an enormous addition to the depôt in Australis. And now, for the first time, the exact number of the primeval creation of the rational inhabitants was definitely ascertained. It was found that, at the era of the

ship, there were in the northern hemisphere 70,589,347 persons, and in the southern 29,410,653 ; thus the total population, which had never been increased, nor, as they had just learned, diminished, was, as before stated, exactly one hundred millions, and these were equally divided between the male and female sexes.

Several years elapsed after the return of the ship before the stupendous change which had been wrought in the condition of the Hesperians, by the knowledge they had acquired of the indestructibility of life, began to produce the effects which afterwards became conspicuous. They were essentially a travel-loving race, and the great stimulus given to this propensity by the discovery of a new hemisphere seems for a time to have absorbed a good deal of their energies. The epoch, moreover, was immediately marked by the complete cessation of voluntary evanescence—in other words, of suicide, which, under the influence of the widely-

spread world-weariness, had become only too common during the last age. When it was clearly understood that evanescence only meant change of place, the ignoble custom came to an end.

It is well worth notice that, at the era of the union, the southern empire, though numerically far inferior to the northern, had reached a very much higher stage of both moral and political development. This superiority is easily explained. For thousands of years the southerners had been acquainted with the true conditions of life; that is to say, they had known that each individual is an indelible unit, in no way to be obliterated; and, therefore, that it is expedient for society to make the best of him. This same knowledge also reacted on the individual, however badly disposed he might have been by nature. He knew perfectly well that he could no more get rid of the society than the society could get rid of him; that, in fact, society was by far the stronger of the two,

and, for this reason, it was plainly his interest to conduct himself at least in an inoffensive manner. It was invariably found that such a course of behaviour, steadily maintained for a lengthened period, reacted so strongly on even a malignant character, that, in a century or two, the subject became a worthy member of society.

In the northern empire, on the other hand, as it was believed, and indeed with truth, that an undesirable and troublesome neighbour could at any time be suppressed, either by the gallows or some equivalent method, criminal legislation seems to have rather aimed at the extirpation than the reformation of the offender. But after the era of the ship, and subsequent union of the whole planet, all this was very speedily changed.

Through the entire period of ten thousand years which, at the time of my arrival, had elapsed since the beginning of the modern history, no revolutionizing discovery had taken place. But, slowly and silently, a change

took place in the characters of the Hesperians. which ultimately led to the complete remodelling of the greater part of their social institutions. Evanescence, except as the result of accident, wholly disappeared, for the age of violence was passed, capital punishment was an impossibility, and suicide a fruitless ebullition of temper. The enforced toleration of everyone by everyone else, worked, in the course of ages, as its inevitable result, a greatly increased kindliness of disposition and demeanour; and this was still further helped when progress of time, combined with the absolute fixity of the population, brought about the strange state of things, that each individual was personally acquainted with every other member of the Hesperian multitude. The number of his acquaintances was 99,999,999.

And now we have the explanation of the great intensity of the astonishment which my sudden appearance in Lucetta excited in that town. Though not differing very much

either in person or dress from many of themselves, yet the mere fact of my being a stranger to them was sufficient evidence that I was either a new creation on the planet, or had come from another world. In either case my arrival gave them hope that some light was about to be thrown on the great question which had vexed them all so long—Who was the Maker of the Universe?

CHAPTER XII.

Of the great social changes which resulted from the discovery of the Indestructibility of Life.

When this period of the acquaintance of everyone with everyone else had been reached, very little time intervened before a completely socialistic system was established all over the world. In fact it soon became obvious to all that private property had now become a clumsy incumbrance. The substitution of socialism was greatly facilitated by the extreme ease with which all the necessaries, and most of the luxuries, of life were procurable. This was partly due to the favourable climatic and other conditions of the planet, and partly to the extraordinary progress which had been made in the physical sciences

in general, and in chemistry in particular. The universal abundance of vegetable life has been already noticed, and also the absence of all noxious and destructive types of the animal kingdom. Food, in the shape of esculent fruits, grew everywhere and in superfluous abundance; and, for all who tired of these, a perfect equivalent for the flesh of animals was readily available.

Hesperian chemists had, long before this, completely solved the problem, which still baffles their terrestrial brethren, of the artificial formation of organic compounds from their ultimate elements. For instance, the seeming roast-beef with which I was regaled on my first morning in Lucetta, had just before been manufactured from some carbon, azote, and water, with a very small admixture of fluorine and potassium, without interfering with and inconveniencing any animal whatever. All the purveyors of provisions were good chemists. It is true that, some thousands of years earlier, the Hesperians were

in the habit of using animal food, but the practice has been for ages abandoned, and is now regarded with abhorrence. Milk and butter and eggs are also manufactured with equal ease, and of singular excellence, out of similar materials.

So much for the supply of food. As for their clothing, it is exceedingly simple, and is made exclusively from vegetable products. It is worn, indeed, merely as a protection from heat or cold; for the notion of there being anything indecorous in appearing in a state of nudity has no existence in the Hesperian mind. Thus, the two great leading wants being easily supplied, the population being all personally known to each other, and a due consideration for the wishes of their neighbours being universally recognized as a ground of moral obligation—engrained as this had been into the disposition of each through ages of exercise—the establishment of a perfect socialistic system was easily accomplished.

The state of society which, at the time of my visit, prevailed over the whole planet, was one which could not have existed under less favourable conditions of life. It was not based on the chimerical theory that everybody is supposed to sacrifice himself for everybody else; and thus unite in each person the incongruous characters of a greedy baby and a self-denying saint—selfishly and unscrupulously taking from others the fruits of their labour, while unselfishly yielding up whatever he has earned by his own hard work. Far from it: the Hesperian system was founded on the fair and rational doctrine of give and take, honestly carried out. No one was afflicted with an inscrutable desire of thrusting a 'happiness' on his neighbour which he, for himself, repudiated with scorn. The gifts of nature were so very liberal that a small amount of daily labour on the part of each person sufficed to discharge his debt to the society; and this amount was, by everyone, regarded

as a rigorous debt of honour, never to be shirked or evaded in any way.

In the appointment of this prescribed quantity, it was a recognized maxim in practice that, whenever it was possible, the inclination of the labourer should be consulted. Special commissioners entrusted with this task were from time to time appointed in each town and district. The work proceeded with great smoothness. Everyone was anxious to do his share honestly. There were none of those idle scamps whose only object is to loaf around in idleness at the expense of their neighbours, and whose existence elsewhere renders every form of socialism an impossibility, except under a system of espionage so rigorous as to render life an intolerable burden. Everyone, by this time, being quite competent for the work of every skilled trade or calling, exchanges of allotted tasks were easily effected. The more irksome the labour, the shorter was the time required from the

labourer. Sometimes it would happen that a man or woman would prefer, instead of working for a short time each day, to execute a long task by continuous labour, so as to have leisure afterwards for some special pursuit; this also was a matter easily arranged.

This organization of labour was not nearly so complicated a business as such a task would be if attempted on the earth, even if we were to assume that the average terrestrial character was as well-conditioned as that of the Hesperians. For it is plain that, under the Hesperian conditions of life, the number of separate callings and professions is comparatively small. A world where there are no children has no need for the vast machinery of education; the great army of schoolmasters, tutors, and professors is non-existent. The absence of death leaves no place for the undertaker and his ghastly satellites. There are no clergy, for there is no known God.

Medical science is, as has been already

noticed, in a very strange condition, or rather is non-existent. Dissection of the vital parts of the body being impossible, the physician is indebted to the analogy of the lower animals for his hypotheses as to the structure of the rational being. Fortunately, diseases are unknown.

As for surgery, a singular revolution in its practice was an immediate result of the discovery of the real nature of evanescence. In the earlier ages, before the weariness of life had set in to any great extent, the occurrence of any grave bodily lesion, which, though not fatal, was sufficient to involve a serious mutilation, or the entire loss of organs of perception, was a calamity so great that the inhabitants of the earth, confined as they are to one short bodily life, would find it hard, even in imagination, to realize its severity. In spite of all precautions such accidents sometimes took place, and the unhappy sufferers, reluctant to surrender their whole existence, would often consent to

undergo operations which had the effect of leaving them to abide for ever as helpless, mutilated trunks. So the Hesperian surgeons were skilful amputators of limbs, and they could, and often did, perform other serious operations for the purpose of preserving the patient from evanescence. Still their success was but small, for the wretched condition of the sufferer usually led to the extinction of his life under the metronomic law of Adverse Balance—evanescence, in fact, was only postponed.

But, as the world-weariness gained ground, few were found who were willing to purchase life at so heavy a price. And finally, when the true nature of evanescence was understood, all operations except those of the most trifling character ceased at once. Whenever a serious accident takes place, an anæsthetic sufficiently powerful to destroy life is administered, and the patient awakes immediately, with his organism restored, at the South Pole.

The complete establishment of the communistic system also contributed to the simplicity of the social arrangements in the planet; inasmuch as all the multifarious professions which are incidental to the tenure of private property collapsed at once. There was no further need for lawyers, attorneys, bankers, stockbrokers—still less for stock-jobbers—and the great multitude formerly required to serve as policemen, coast-guards, and excisemen, were now at liberty for more directly useful occupations.

CHAPTER XIII.

How the Doctor delivered a course of lectures on the History of the Earth and its Inhabitants—Of the effects of his ghastly description—Of the attempt of two Hesperians to reach the Earth; and of its unsatisfactory result.

[At this point the doctor's notes become very scanty: still the following facts may be readily gleaned from his memoranda. Hesperos was the abode of one hundred millions of rational and highly-cultured beings, incapable alike of increase or diminution in number, constrained to exist on the surface of the planet, and firmly believing in the existence of an intelligent Creator who, although in all his works which were accessible to them, he manifested unmistakable marks of benevolence, refused to speak to or hold any communication with his intelligent

creation. And yet, for such communication they craved with all their soul and with all their strength. The vast temples erected in their cities to the Unknown God, and the solemn services held therein, as well as their intense devotion to all branches of natural science, alike indicated their longing to penetrate the mystery of the material world, and reach the spirit which they believed to lie behind.

The hopes which had been excited so many years earlier by the discovery of the immensity of the Universe when the cloud-screen was passed, had ended in bitter disappointment. Vastness of power on the part of the Maker had indeed been strongly illustrated; but, most certainly, no light had been thrown on any of his other attributes. So it is easy to understand the intensity of interest with which the news of an arrival from another world was received. That their visitor came from the earth was at once ascertained, as we have already seen, by his familiarity

with the earth charts in the museum at Lucetta.

When this wonderful arrival was telegraphed at the metropolis, the world-parliament instantly met. It was resolved that a committee should be appointed at Lucetta, whose business should be, first, to learn the stranger's language, and then to communicate to him a general description of Venus, and the leading facts in the history of her inhabitants, so as to enable him to bring before them the main points of agreement and difference in the conditions of life on the two planets. That these instructions were well carried out by the committee is manifest from the notes which have now been brought to light and translated into the English tongue.

As soon as this preliminary process was completed, the doctor was requested in his turn to give the Hesperians an account of the affairs of the earth; of its physical condition; of its irrational animals, supposing

such to exist; of its rational animals, one of which they had seen; and lastly, to answer the great question of questions—Whether the terrestrial rational beings had any direct knowledge of the Maker of the whole.

On all of these points he delivered lectures in the cathedral of Lucetta, to a crowded audience of more than five thousand people. From the short notes in his pocket-book it is easy to gather his manner of treating the above subjects. Of course the reader will bear in mind the great intensity of his misanthropy.

He began by describing the physical condition of the earth's surface, and contrasting it, much to its disadvantage, with that of Hesperos. In illustration of his malignant remarks, he seems to have made much use of the great terrestrial charts which had been constructed at the observatories. The awful polar climate of the earth came out very unfavourably when compared with that of the corresponding regions of Hesperos; as did

also the burning heat of the torrid zone, unprotected from the solar rays by a permanent screen of cloud. He dilated, with much relish, on the phenomena of earthquakes, volcanoes, thunder and lightning, deluges, droughts, great sandy deserts, and other terrestrial peculiarities of a disagreeable character, which were quite unknown to the Hesperians.

As he approached the animal kingdom his spirits seem to have risen. The abundance on earth of loathsome and noxious types of animal life; their portentous fecundity; the formation of entire species which can live only by destroying and devouring the weaker and more defenceless, were happily contrasted with the innocent fauna of Hesperos, confined to a small number of harmless, frugivorous animals, in which the power of reproduction no more than sufficed to keep up the breed.

But when he came to explain the nature and circumstances of terrestrial rational life,

Van Varken's hatred of the Yahoos burst out in a description which seems to have filled the Hesperian congregation with horror and dismay. The entrance of the human being into life through the same reproductive process as that of the lower animals; the redundancy of procreative power, in respect of the means of subsistence, which is one of the curses of the race; their helpless infancy; their wretched education; their liability to horrible and torturing diseases; their early extinction by death; the low civilization in which the masses vegetate, leading the lives of cattle; their mutual hatred; their incessant wars—all of these topics, and many more of a similar nature, were expatiated upon by the doctor with a cheerful vehemence which much astounded his audience, and enhanced the contrast between all these abominations and social life in Hesperos.

As for the final question—that of the Maker of all—he began by hypocritically

expressing his deep regret that his profession as a Doctor of Medicine rendered him but a badly qualified person as an expounder of theology; he also professed an earnest wish that a learned terrestrial Doctor of Divinity could be found to relieve him of such an uncongenial task. The reader will readily appreciate the sincerity of his aspirations after the help of a Yahoo divine.

He then proceeded to inform his audience that the inhabitants of the earth, not being included, as the Hesperians, in one vast empire, but being dispersed in a great number of independent nationalities, which varied very much in their degrees of civilization, had formed for themselves equally varying theological systems. That those who were in the lowest grades, either did not recognize the Maker at all, or, if they did recognize him, regarded him as a fiend who was only to be propitiated by offering him bloody sacrifices. That there was another system of religious belief, the

followers of which were in a much higher state of civilization than those last spoken of, who held that all true believers (meaning themselves) would be ultimately admitted to a paradise of sensual delights, the most effectual passport being the extirpation, by the sword, of unbelievers (meaning all the rest). That another system, the followers of which were, perhaps, the most numerous of any, taught that the Maker would ultimately grant the boon of cessation of existence to his creatures, but only after they have undergone a long series of transmigrations into other forms of life.

At last he came to the form of religion which he described as that which, though not including the greatest number, is certainly professed by all of the most highly civilized types of humanity. Into the doctor's exposition of the Christian faith we need not enter. Suffice it to say that when he came to the explicit statement—delivered with evident marks of delight—that the Maker

designed the greater part of the human race to live everlastingly in excruciating torture by fire, the whole of the assembly rose simultaneously to their feet and left the cathedral. They would hear no more.

Every word of these extraordinary lectures was automatically taken down, and sent through the world as fast as delivered. The whole history of the earth contained therein fell like a thunderbolt on the Hesperians, who were quite unprepared for any such revelation of the Unknown. After this, the notes show that the doctor had many interviews and discussions with people from all parts, but no memoranda of them are to be found. Clearly, the result of his communications was an intensifying of the gloom which prevailed in Hesperos. The hopes of the people, which had been strongly excited by his arrival, were as suddenly changed to despondency. And no wonder; for, certainly, tidings of such a Maker as the Being depicted by their visitor, were not calculated to raise any enthusiastic delight.

Doubts seem to have sprung up among some of the Hesperians as to the perfect accuracy of his statements, which, as one or two of the leading journals pretty plainly hinted, might possibly be coloured by prejudice. So incredible, indeed, did some parts of his lectures appear, that two enterprising persons, then in the juvenescent period of life, volunteered to attempt the passage to the earth, if Van Varken would entrust them with the secret of transference. They wished to examine the terrestrial phenomena, both religious and temporal, for themselves.

Dr. Van Varken, who was much mortified at these suspicions as to his veracity, received them with some coolness. He made two objections to their proposal. First, he was under a pledge of secrecy to Mr. Homi, and, secondly, the attempt would be attended with extreme peril to themselves. For it was quite impossible to tell beforehand what region of the earth they might land in; and, if they chanced on an uncivilized nation,

death by mortal lesion, and that beyond the salutary influence of the Hesperian pole, would be their nearly certain fate.

But his indignation at their unworthy suspicions, and his burning desire that an irrefragable proof of the truth of his statements might be afforded to the sceptics, by an actual inspection of the earth by two pairs of Hesperian eyes, at last overcame his scruples. He argued that, inasmuch as he himself had actually discovered the mode of passing the interplanetary space, he was, in that respect, bound by no promise to Mr. Homi; and that, having warned the adventurers of the risk they ran, his duty to them was discharged. So he gave way at last, and imparted the secret of interplanetary transference by the process of disintegration.

All in vain; the disintegration was effected at once without the slightest difficulty; but when that stage was reached the Hesperian polarity proved too strong for the terrestrial influence; overcame it instantly, and the

two missionaries to the earth, to their very great chagrin, found themselves reintegrated, in perfect safety, at the South Pole of Venus, according to the ordinary Law. It was quite plain that the Hesperians were absolutely bound to their planet, and that escape, even if it were desirable, was hopeless.

CHAPTER XIV.

Of the further wanderings of Dr. Van Varken—Of his visits to Australis and the great Observatory—Of a strange physical Theory concerning the Tornado—Supposed cause of the Doctor's return to the Earth.

AFTER the delivery of his remarkable lectures, the doctor's notes become even scantier than before, and are of quite a fragmentary character. We can gather from them that his time thenceforth was mainly occupied in travelling in various directions through the country; and this is, very likely, the cause of the deficiencies in his memoranda.

He seems to have been greatly struck with the vast engineering works which met him everywhere; and especially with the magnificent roads on which carriages, like those at Lucetta, ran on rails; these car-

riages were free to all; everyone in his turn took his share in managing the service, like any other calling. His first visit was to the great imperial metropolis, Australis, to which he of course proceeded by the submarine route.

When he arrived there it was the winter season for the southern hemisphere. During the discussion on the selection of the universal metropolis, at the time of the union of the hemispheres, an objection had been raised to Australis, namely, that there was darkness for about one-third of the year. But, in consequence of the other advantages of the site, the objection was overruled, and that the more readily, as an artificial chemical light of extraordinary brilliancy had just been discovered. So great was its power that, for moderate distances, it nearly equalled the light of day. These were the lights which Van Varken, on his first arrival, saw shining in Lucetta, and on the ships in the bay. And thus, when he reached Australis, he

found not only the city, but the whole surrounding valley blazing with this wonderful illumination. Some persons, indeed, could never reconcile themselves to this artificial light, so another city was, in course of time, built at the North Pole; and, by migrating at the proper seasons, from one to the other, perpetual daylight might be enjoyed.

The curt and jejune memoranda which remain tell us but little of the metropolitan city. The points which seem to have specially impressed him were—The great magazines or depôts of all sorts of articles which, in our cities, are usually sold in the shops, and which, under the Hesperian system, are abundantly supplied by the communistic labour; from these stores everyone supplied himself as he wanted. The splendid museums of science and art, and the picturesque style of the houses, all of which were, as in Lucetta, detached from each other, and but of one story in height, filled the doctor's soul with admiration. Above them all was

conspicuous the great temple or cathedral of the Unknown God. The gorgeous services performed there made a wonderful impression on the traveller; he was specially affected by one solemn and mournful chant, sung in unison by the whole of the immense congregation, and accompanied in strangely rich and complicated harmony on the largest organ he had ever seen.

But, beyond these few details, nought is recorded. After his return to the north, he paid a visit to the great Observatory whose foundation he has so fully described. The original structure had been removed, and the buildings which now occupy the site are of vast dimensions, and are furnished with every astronomical instrument which the great skill of the Hesperians is competent to execute. Specially noteworthy are the mechanical contrivances for moving and adjusting the ponderous telescopes. Though these weigh many tons, the mere pressure of the finger on a couple of metal knobs suffices

to direct any of them to whatever point of the sky is to be examined; and, with the telescope, the platform for the observer simultaneously takes the requisite position.

He found some of the astronomers engaged in abstruse mathematical calculations, in connexion with a theory which had just been suggested as an explanation of the chronic equatorial tornado. It was this, that Hesperos has a satellite of small dimensions, not, indeed, exceeding a mile in diameter, but of very great density; and that this satellite revolves in the plane of the equator with tremendous velocity, so close to the surface that it comes into actual contact with the water several times in each revolution. Hence the terrible waves and storms. Whether this ingenious theory was verified or not we have no record. Unfortunately, at the time of the doctor's visit, the earth, being in conjunction, was not favourably placed for observation. He seems to

have suffered a great deal on this excursion from the extreme rarity of the air.

And, at this point, the notes may be said to end. Nothing more than a few incoherent jottings on the last remaining page are legible. From these I gather that he went back to Lasondre, and there, having probably informed the inhabitants of his surgical profession, he delivered a lecture on the anatomy of the human body. When we remember the invincible obstacle to any scientific study of the anatomy of the Hesperians which was presented by their conditions of life, we can easily understand that such a lecture, from an expert, must have excited unusual interest, and, combining this fact with the abundance of strong and profane expressions which disfigure the concluding memoranda, I think it not at all unlikely that some signs of a desire to avail themselves of the doctor's own person for the purpose of dissection may have been exhibited by his audience, and may have suggested to his mind the ex-

pediency of a hasty return to the earth. But I wish it to be distinctly understood that this is only a conjecture, and not, as the remainder of his history, based on the explicit statements of the note-book.

At all events the discovery of the manuscript in the University library is abundantly sufficient proof that the Thibetian influence was powerful enough to overcome the Hesperian attraction, and that he succeeded in getting back to the earth. So much, I say, is certain, *et hypotheses non fingo.*

And here ends our knowledge of the Godless Immortals. It is not likely that their hundred and sixty years' additional existence have lightened the World-Weariness and Sorrow which was plainly settling down upon them like a heavy pall.]

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